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ABSTRACT

This military-developed text consists of six lessons designed to give students an understanding of the fundamentals of management. Covered in the individual lessons are the following topics: the nature of management (leadership and the functions of management); principles and policies of management (management policies, characteristics of good policy, the army manager, problem areas, and schools of management theory); the function of planning (reasons for planning, steps in planning, characteristics of a good plan, results of poor planning, and benefits of good planning); the function of organizing (steps in organizing, types of organizations, line organization, line-staff organization, functional organization, and organizing a staff element); the function of directing (the basis for directing, the extent of direction necessary, communicating the direction, oral communications, written communications, nonverbal communication, three-way communication, barriers and gateways to communication, motivation, and directives); and the functions of coordinating and controlling (methods for and obstacles to coordination, the function of controlling, developing standards, collecting data, corrective action, the work simplification program, work distribution charts, flow process charts, layout studies, office layout, and work measurement techniques). Each lesson contains objectives, readings, review exercises and answers, and optional exercises and answers for student self-study and evaluation. (MN)

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MILITARY CURRICULUM MATERIALS

The military-developed curriculum materials in this course package were selected by the National Center for Research in Vocational Education Military Curriculum Project for dissemination to the six regional Curriculum Coordination Centers and other instructional materials agencies. The purpose of disseminating these courses was to make curriculum materials developed by the military more accessible to vocational educators in the civilian setting.

The course materials were acquired, evaluated by project staff and practitioners in the field, and prepared for dissemination. Materials which were specific to the military were deleted, copyrighted materials were either omitted or approval for their use was obtained. These course packages contain curriculum resource materials which can be adapted to support vocational instruction and curriculum development.

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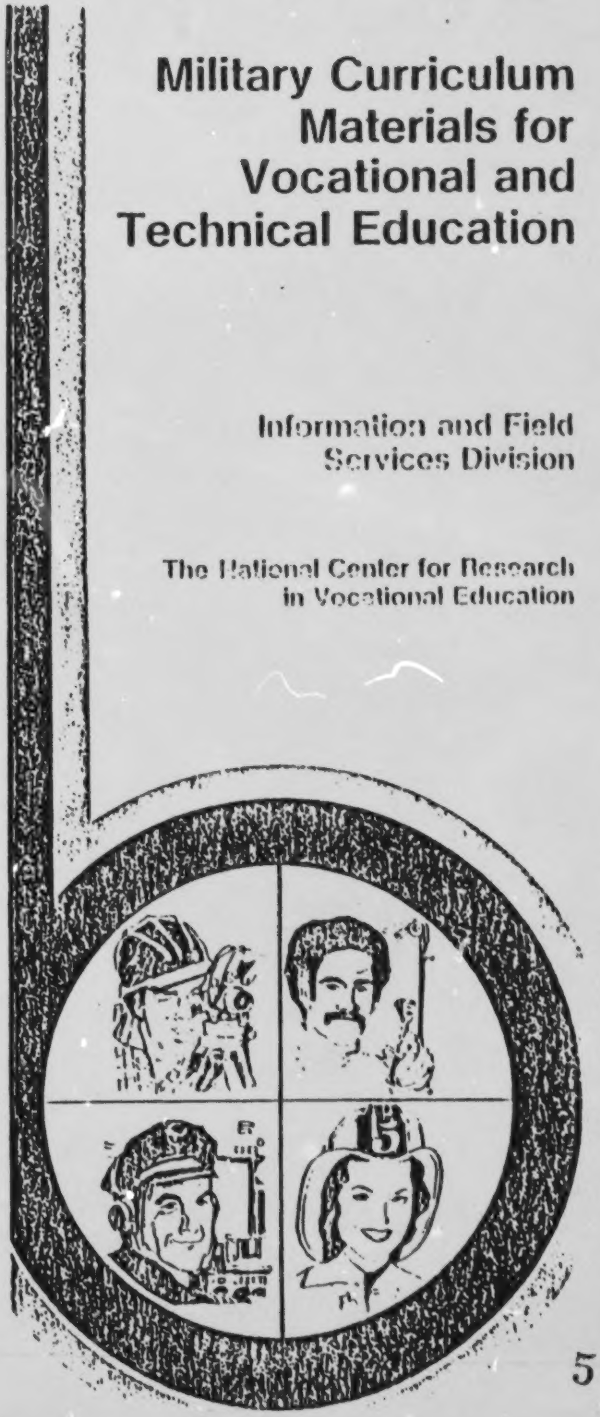

Military Curriculum Materials Dissemination Is . . .

an activity to increase the accessibility of military developed curriculum materials to vocational and technical educators.

This project, funded by the U.S. Office of Education, includes the identification and acquisition of curriculum materials in print form from the Coast Guard, Air Force, Army, Marine Corps and Navy.

Access to military curriculum materials is provided through a "Joint Memorandum of Understanding" between the U.S. Office of Education and the Department of Defense.

The acquired materials are reviewed by staff and subject matter specialists, and courses deemed applicable to vocational and technical education are selected for dissemination.

The National Center for Research in Vocational Education is the U.S. Office of Education's designated representative to acquire the materials and conduct the project activities.

Project Staff:

Wesley E. Budke, Ph.D., Director
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Project Director

What Materials Are Available?

One hundred twenty courses on microfiche (thirteen in paper form) and descriptions of each have been provided to the vocational Curriculum Coordination Centers and other instructional materials agencies for dissemination.

Course materials include programmed instruction, curriculum outlines, instructor guides, student workbooks and technical manuals.

The 120 courses represent the following sixteen vocational subject areas:

- Agriculture
- Aviation
- Building & Construction Trades
- Clerical Occupations
- Communications
- Drafting
- Electronics
- Engine Mechanics
- Food Service
- Health
- Heating & Air Conditioning
- Machine Shop
- Management & Supervision
- Meteorology & Navigation
- Photography
- Public Service

The number of courses and the subject areas represented will expand as additional materials with application to vocational and technical education are identified and selected for dissemination.

How Can These Materials Be Obtained?

Contact the Curriculum Coordination Center in your region for information on obtaining materials (e.g., availability and cost). They will respond to your request directly or refer you to an instructional materials agency closer to you.

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FUNDAMENTALS OF MANAGEMENT

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FUNDAMENTALS OF MANAGEMENT

Correspondence Course

14-1

Developed by:

United States Army

Development and Review Dates

August 1971

Occupational Area:

Management and Supervision

Cost:

Print Pages:

182

Availability:

Military Curriculum Project, The Center for Vocational Education, 1960 Kenny Rd., Columbus, OH 43210

Suggested Background:

None

Target Audiences:

Grades 10-adult; administrators

Organization of Materials:

Student exercise booklet with objectives, lesson assignments, and review exercises and answers; text with optional exercises and answers

Type of Instruction:

Individualized, self-paced

Type of Materials:	No. of Pages:	Average Completion Time:
Fundamentals of Management		
Lesson 1 – Introduction to Management	12	Flexible
Lesson 2 – Principles and Policies of Management	16	Flexible
Lesson 3 – The Function of Planning	11	Flexible
Lesson 4 – The Function of Organizing	29	Flexible
Lesson 5 – The Function of Directing	12	Flexible
Lesson 6 – The Functions of Coordination and Controlling	59	Flexible
Exercise Booklet	29	

Supplementary Materials Required:

None

Course Description:

This course was designed to give the student an understanding of the fundamentals of management. It consists of six lessons containing objectives, readings, review and optional exercises and answers, and suggested additional readings from both military and civilian sources.

Lesson 1 — *Introduction to Management* contains five sections discussing what management is, leadership, an explanation of terms, the functions of management and conclusions. Appendices contain a summary of the functions of management and the optional exercises and answers.

Lesson 2 — *Principles and Policies of Management* contains seven sections covering principles of management, management policies, characteristics of a good policy, the army manager, analyzing problem areas, a summary and suggested readings. The appendices contain sections on principles and characteristics of management, schools of management theory, and optional exercises.

Lesson 3 — *The Function of Planning* contains ten sections including an introduction, principles of planning, why we plan, how to plan, steps in planning, characteristics of a good plan, organization for planning, results of poor planning, benefits of good planning, and a summary.

Lesson 4 — *The Function of Organizing* contains eleven sections including an introduction, considerations prior to organizing, steps in organizing, characteristics of a good organization, development of types of organization, line (scalar) organization, line-staff organization, functional (directorate) organization, organizing a staff element, and a conclusion. Appendices cover preparing an organizational chart, an organization chart, types of organization, a checklist of organization effectiveness, and optional exercises.

Lesson 5 — *The Function of Directing* contains fourteen sections covering an introduction, the meaning of directing, the basis for directing, the extent of direction necessary, communicating the direction, oral communications, written communications, communication without words, three-way communication, barriers to good communication, gateways to communication, motivation, directives, and a summary.

Lesson 6 — *The Functions of Coordinating and Controlling* contains twenty-six sections covering an introduction; the function, the need for, methods of, and obstacles to coordination; when is coordination complete; the function of controlling; developing standards; collecting data; corrective action; the work simplification program; basic steps in methods improvement; a work distribution chart; analysis of the chart; a flow process chart; layout studies; office layout; application of office layout principles; motion economy work measurement; where to use work measurement; work measurement techniques; developing work measurement standards; and a summary, conclusions, and references. Several examples are appended.

Each lesson contains objectives, readings, review exercises and answers, and optional exercises and answers for student self-study and evaluation. This would be useful for administrators, or students who anticipate moving into management positions.

Edition code-1

MEMORANDUM

46-1

INTRODUCTION TO MANAGEMENT

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Prepared by
United States Army Adjutant General School
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Edition date: Aug 71

1. WHAT IS MANAGEMENT? There is some degree of management in almost every situation which involves the actions of two or more people, whether it is in the home, factory, school, church, club, shop, bank, Army, or Government. It may be the familiar and direct relationship of a father to his family, or the highly complex network of relationships in a large corporation or Army organization. Basically, however, the same management procedures apply: plans and decisions are made, actions take place, controls are established, and results are achieved. The process may be automatic or semiautomatic in a family or other small grouping, but it must be a considered, well-organized procedure in a business or Government activity.

Not all people view management in the same way. Some see it as a combination of personal and administrative skills. Others consider it a technique of leadership. Still others say it is a means of coordination and cooperation. Some call it an art, others a science. Actually, it is all of these, but they are only part of the picture. Management is a distinct entity. Although intangible, it has basic and interrelated functions and activities. Management can be studied, knowledge about it can be obtained, and skill in its application can be acquired.

Management must be considered from the dual viewpoint of the manager and of the people in the organization he directs. The manager sees it as knowing what things must be done and getting other people to do them. The people who do the work regard management as a nebulous "they" who pay salaries and control working hours. "They" make the people who work for them either miserable or reasonably satisfied with their jobs. "They" create a pleasant or a disagreeable organizational atmosphere. "They" carry the big stick whose use may or may not be prefaced by soft words.

This dual approach to management helps to clarify the personal ways in which the manager influences the actions of others. Since his success depends on how well the individuals in his organization do their jobs, he cannot afford to overlook the fact that he must look at management from their viewpoint as well as his own. Inherent, then, in any discussion of management is the human-relations element. An organization consists of people, people who must be recognized and treated as individuals. A student of management must first of all recognize the underlying principle that the individual worker is the indispensable man without whom management could not exist.

It is management's responsibility to bring men, money, and materials into functional alinement. The work, the worker, and the work place must form a harmonious whole that in turn must be in harmony with the overall organization. Management must make sure that organizational segments dovetail and that there are no protruding, obtrusive, or nonessential elements. Management is organizing; it is planning for the organization; it is directing and coordinating the work that goes on in the organization and establishing and maintaining controls over the work, the worker, the materials and equipment, and the place and environment in which the work is performed; it is establishing definite goals and reaching them.

2. LEADERSHIP. A good manager is a good leader. He has the personality, vision, knowledge, courage, judgment, mental flexibility, and integrity of character that make others want to carry

out his orders. Because he has others subordinate to him and subject to his command, he must give direction and purpose to their efforts. Leadership is work. All work performed by leaders, however, is not management work. Although it is essential for a good manager to be a good leader, many outstanding leaders are, in fact, very poor managers.

Broadly speaking, there are two types of leadership: personal leadership and management leadership--and there is a definite distinction between the two. In personal leadership, authority is highly centralized, and the leader personally makes all, or most, of the decisions for the entire organization. Regardless of the size of the enterprise, subordinate supervisors or leaders have little authority to make decisions about their work. The leader (manager) checks on how things are going by personally inspecting and auditing work in progress as well as completed work. The most significant characteristic of this type of management is that the manager does a great deal of work that his subordinates could do, or be trained to do, as well or better.

If the manager is an outstanding individual, personal leadership may be very successful. However, it discourages independent thinking, limits the growth of subordinates, and restricts the size and diversity of the organization to the personal abilities of the manager. Moreover, if he is incapacitated, transferred, or for other reasons leaves the organization, there is often a serious breakdown in operations.

The significant difference between personal leadership and management leadership is that in management leadership the manager limits himself, as much as possible, to performing work that only he (because of his position) can do effectively. As manager, the leader still makes use of his personal attributes and abilities, but he uses them in work different from that of his subordinates. By so limiting himself, he can extend his efforts throughout a very large organization.

Management leadership is essential in the Army. Under a policy of decentralization, responsibility and authority are delegated to the lowest organizational level possible. Yet, there are still some managers and supervisors in the Army who operate under their own system of personal leadership. Many of them appear to be quite successful, but they are of limited value to the Army in that they fail to develop subordinates to their full potential. They have left the "man" out of management. The Army's most critical resource is manpower, and the most difficult and demanding part of an Army manager's job is manpower management. Man is the only resource with an unlimited potential, simply because he can devise improvements. Skillful management leadership must be exercised to gain the maximum benefit from the aptitudes and potentialities of men.

3. EXPLANATION OF TERMS. Most of the words used in a discussion of management are familiar to all of us and are heard in everyday conversation. However, since even common words may mean different things to different people, and their meanings are frequently determined by the context in which they are used, it is important that we have a mutual understanding of some of the terms used most often in management.

a. Accountability or responsibility: the obligation of a subordinate to a superior for assigned work. For instance, if your commanding officer has appointed you to take charge of the annual United Fund drive, it is your job to see that the drive is properly conducted. If you have assistants, they, in turn, are accountable to you.

b. Assumption: a supposition or premise based on a stated fact or a known condition or situation. In planning, it is almost invariably necessary to make assumptions. If the Fund drive is set to start on October 5th, it is a safe assumption that personnel will have been paid a few days previously.

c. Authority: the right of decision or command. When you were told to take charge of the Fund drive, you were given the authority to decide how it should be conducted and to give directions to your assistants.

d. Controlling: exercising authority to insure compliance with plans, policies, and procedures. This involves checking, analyzing, and correcting. If one of your Fund drive assistants fails to make required reports, a quick check may tell you that he has forgotten the due date or that he has not yet started on the work you assigned him. Or perhaps you will find that he is on emergency leave and you will need a replacement for him. In any case, the control device of checking operations will enable you to keep things going according to schedule.

e. Coordinating: the process of integrating all efforts and details necessary to accomplish a given objective. In the matter of the Fund drive, supervisors, section chiefs, and department heads must be convinced that their active support is needed. You also need the help of those in charge of publicity media, such as radio, newspapers, and other publications. You need to make sure that no other fund-raising campaign will be conducted at the same time. In short, you must coordinate with many other officers and activities if your plans are properly carried out.

f. Directing: issuing instructions, providing guidance, and stimulating in others a desire to attain the objective. For the Fund drive, this will include distribution of forms to be filled out, posters, and promotional literature.

g. Efficiency: the ratio of actual work output to total possible output. If 100-percent participation in the Fund drive is attained, everyone has operated at maximum efficiency.

h. Element: one of a series of specific work steps or actions. One of the elements of the Fund drive is the publicity program.

i. Fact: a condition of undisputed actuality. It is a fact that there are organized charities which receive contributions from the United Fund.

j. Management: a process of establishing and attaining objectives to carry out responsibilities. It is your objective to gain maximum participation in the Fund drive.

k. Manager: a person who plans and supervises the actions of others. As used in this instruction, manager is synonymous with commander, supervisor, or leader. You are the manager of the United Fund drive.

l. Mission: the purpose for which an organization exists; the result attained when the sum of all objectives is reached. It is your mission to bring the Fund drive to a successful conclusion.

m Objective: a clearly defined goal toward which the efforts of an individual or a group are directed. Each of your assistants must have a specific objective; e.g., one of them will arrange for full publicity coverage.

n. Organization: a group of individuals working for a common purpose. You and your assistants form a committee (organization) working to make the Fund drive a success.

o. Organizing: establishing proper relationships among men, money, and material to attain a given objective. You do this when you assign tasks to each of your assistants, give them a place to work, and provide materials with which to work.

p. Plan: a projected course of action. When you have decided when to conduct the drive, who will do specific portions of the work, where they will do it, and the general procedures they will follow, you have formed a plan for action.

q. Planning: determining the best course of action to accomplish the objective quickly, efficiently, and economically. Before you complete your plan for the Fund drive, you will have considered several methods of conducting it and will have selected the one whereby the largest number of people can be contacted in the shortest period of time, by the best qualified and fewest number of persons.

r. Policy: a broad directive that guides the organization toward the achievement of objectives. It is the policy of your installation to encourage voluntary contributions to the United Fund. Within that policy, you have established for your assistants a policy of soliciting contributions without using pressure methods.

s. Principle. A fundamental statement or truth providing a guide to action. One might call the principle underlying the United Fund drive, "the principle of helping others."

4. FUNCTIONS OF MANAGEMENT. Management begins whenever one person organizes and directs the work of one or more persons. It may be in a squad or an Army installation, an office group, or a maintenance crew; it may be at a high or a low managerial level. Management applies to all levels of command. In the Army there are many managers in addition to the commander. There are the chiefs of staff, the chiefs of staff sections, the operating officials, and the supervisors, military and civilian, at all levels. Each must make sure that the principles of management are carried out within the organizational element he supervises. Each must carry out in his area of responsibility the functions of management, which are categorized as planning, organizing, directing, coordinating, and controlling.

These functions provide a skeleton for building the entire management structure. Although each of them will be discussed in detail in other memorandums, we shall mention them here in general terms to show you their purposes and interrelationships. They progress logically, and the actions frequently overlap or are performed concurrently. All of them are continuous processes and are not marked by stop-and-go signals.

a. Planning. This is the process of selecting the best line of action to get the work done in the least time and with the least expense. Planning consists of deciding what must be done, where to do it, when to do it, how it should be done, and who will do it. It includes gathering information, preparing it for use, and developing instructions for steps of action.

Planning is the first step in the

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management cycle. It may continue throughout the other functions, but it must always precede action. Although planning takes place at all levels of supervision, at higher echelons the manager spends more time in planning and has more assistance and advice. Usually, he determines objectives and selects the best lines of action from among several presented by his staff. At lower levels, planning is more concerned with the details of the operation.

At one installation, the commander thought that administrative work could be handled more efficiently by creating a stenographic pool to service all elements within the headquarters. He called a meeting of his key staff officers and asked each of them to study the matter and make recommendations as to whether it would be practical and how it could best be put into effect. From their recommendations he developed a broad, overall plan for establishing the activity and issued a directive. Each of those affected developed his own plans within the framework of the directive, with plans becoming more detailed as they proceeded down the line. For instance, the plans of the personnel officer included such things as the writing or rewriting of job descriptions, eliminating present jobs in some sections, establishing new jobs, and interviewing and placing personnel.

b. Organizing. Organizing is the process of bringing together the work, the worker, and the work place in a manner that will get the work done most efficiently. It establishes relationships between activities and personnel and allocates resources. It must be considered as a means to an end and not an end in itself.

(1) Organizations are a combination of the formal and the informal. The actions to be performed are the primary factors in determining the formal organizational structure; they are the basis for allocating men and materiel, assigning responsibilities, devising standards and procedures, and establishing organizational charts. However, it must be recognized that an organization is only as good as the people in it; an elaborate organizational chart can't get the work done.

(2) Within every formal organization there is an informal one created by the interrelationships among people. The astute manager can use this informal organization to strengthen his operations, maintain high morale, and create a harmonious working atmosphere.

The people who make up organizations behave as members of groups, and their membership in these groups helps to shape their attitudes toward their work and the organization as a whole. Groups exist at every level, from privates to five-star generals and from clerical personnel to top management executives. Usually, there is a "natural leader" in the group--who may or may not be the assigned leader.

Informal groupings may stem from a number of causes, such as common work or social interests, hobbies, religious affiliations, political beliefs, or membership in clubs and other organizations. Most people belong to a number of informal groups. Take, for instance, Sergeant White. He has one group of friends with whom he works, another in the church he attends, a third with whom he plays golf, and a fourth in the neighborhood where he and his wife live. Often, of course, the groups overlap.

Informal work groups have real power, and the person who usually feels it most keenly is the immediate supervisor. An unpopular supervisor frequently finds his authority being undermined by his subordinates. Members of the group can slow down productivity, reduce the quality of their work, and make the supervisor appear incompetent to his own superiors. On the other hand when the informal organization supports the supervisor, work is done faster and better and morale is higher.

There are many ways in which the informal organization can benefit the supervisor or manager. One of these is the matter of discipline. For example, the officer in charge of a personnel records section made no objection when personnel occasionally arrived late for work. However, one person began to abuse this privilege by arriving quite late every day. Afraid that their boss would start to crack down on tardiness, the offender's fellow workers handled the matter themselves. Whenever this individual came in late he was greeted by loud applause--then ignored completely for the rest of the day. Excessive lateness soon stopped.

In another instance, the supervisor of a production unit had a rush order to fill. To get it out, he figured that all of his personnel would have to work at least 2 hours overtime. The grapevine being what it is, the work group knew about the matter even before the supervisor did. When the supervisor called them together, the group had a plan ready and had already started to work on it. By allowing the group to go ahead in its own way, the order was filled promptly and efficiently.

(3) Committees can sometimes be used as an aid to management. The commander has always had his staff to research and investigate, and to assist him in making decisions. Now, even in lower echelons it is customary for the manager to use certain of his coworkers and subordinates as consultants. In using this technique, the best results are achieved by selecting the persons most directly affected, limiting the number (not more than seven, usually three to five) and having them act in a purely advisory capacity.

(4) Department of the Army Staffing Guides are published for many military organizations. They establish personnel ceilings, but the manager must use great care in selecting individuals to fit into the staffing pattern. He must consider not only professional qualifications but also the interrelationship of personalities and other factors affecting the morale of the organization.

c. Directing. Directing is the process of getting people to perform their jobs well, willingly, and quickly. It is synonymous with leadership. It consists of more than writing and issuing orders; the successful manager makes his personnel want to do what he tells them to do. Ideally, he manages them in such a way that they do not realize they are being managed. Skillful handling of personnel contributes immeasurably to smooth and successful group efforts and is the key link in the management chain.

(1) Probably the most important element of directing is clear communications. A manager's decisions and desires are of no value unless the persons affected by them know what they are. A directive should pertain to only one subject; it must be positive in nature and be expressed simply, briefly, and plainly. A good rule to follow in any written communication is to remember that if anyone can misunderstand it, inevitably someone will misunderstand it.

Unfortunately, "officialese" is all too common in the Army. Directives are written in a stilted, cumbersome style that is hard to read and harder to understand. Take the case of Lieutenant Smith, who was planning a new office layout. One of his directives read, "Take necessary action to effect the removal of filing cabinets, letter-size, sectional-type, four-drawer, bearing the designations 'A' and 'B' respectively, from the area occupied by the mail and distribution center to that area where the personnel section is located." All he needed to say, of course, was "Move file cabinets A and B from the mail and distribution center to the personnel section."

(2) Standing operating procedures (SOP's) may be considered a part of the directing process. These are guides for individual and group actions. For instance, an SOP for a section should cover all actions the section is expected to perform, the unusual as well as the ordinary. An SOP for a specific job in the section should be so complete that a new employee could, by following it, adequately perform the job. While a directive tells people what to do, an SOP tells them how to do it. It should be in written form, specific in nature, and detailed enough to cover exceptional as well as routine actions.

d. Coordinating. Webster defines the word "coordinate" as "to bring into common action" and "coordination" as "harmonious adjustment or functioning." AR 320-5, Dictionary of United States Army Terms, lists the following: "coordination with--In consultation with. This expression means that agencies coordinated with shall participate actively; their concurrence shall be sought; and that if concurrence is not obtained, the disputed matter shall be referred to the next higher authority in which all participants have a voice."

(1) Coordinating is one of the broadest functions of management and is inherent in all other functions. While we have said that directing is the key link in the management chain, coordinating provides connecting links throughout the chain.

(2) The purpose of coordinating is to secure cooperation. This isn't always easy; you may be assigned an objective which is unpopular with some--or even all--of the individuals or agencies whose assistance you require. In that case, you must be a salesman. You must convince the reluctant persons of the importance of the mission and of the value of their contributions to its overall success. Only as a last resort should you go "to the next higher authority."

(3) Some degree of coordination is required in all phases of management. Coordination is so closely related to planning, organizing, directing, and controlling that none of those functions can be completely successful unless coordination is carefully considered during their initial stages.

e. Controlling. Controlling is the process of seeing that everything is done according to established plans, procedures, and policies. It involves checking actual results against desired results and taking corrective action when needed. If control is exercised in all phases of management, corrective action will seldom be necessary, since flaws in plans and procedures will be detected at the beginning of an operation. Control must be exercised at all levels of command. Operational details may vary according to the size and type of the organization or activity, but the same general procedures are followed: checking, measuring, and evaluating.

The three most common aids to control are personal observations, reports (formal, informal, written, and oral), and inspections.

5. CONCLUSION. An efficient organization reflects effective management. If all functions of management are properly performed, planning will result in a thoroughly sound organization which is directed in a manner that will keep it operating harmoniously and smoothly at peak efficiency with minimum need for corrective action.

Annex A (SUMMARY OF FUNCTIONS OF MANAGEMENT) to Memorandum 46-1.

1. Planning.

   a. Analyze situation to determine what is to be accomplished.
   b. Determine time and resource requirements and evaluate alternative courses of action.
   c. Develop policies and procedures within which the plan will be implemented.
   d. Establish measurable goals, attainments of which will accomplish plan.
   e. Develop a plan that will best implement courses of action selected.

2. Organizing.

   a. Determine functions required to accomplish mission.
   b. Group related functions.
   c. Define and establish organizational relationships.
   d. Assign responsibilities and delegate authority.
   e. Select and assign personnel and other resources.
   f. Insure control through an optimum span of management.

3. Directing.

   a. Determine the extent of the direction necessary.
   b. Select methods of communication which will convey to the pertinent elements of the organization the action desired.
   c. Motivate individuals and elements to assure the action desired.
   d. Communicate the requirement.
   e. Supervise execution of the requirement.

4. Coordinating.

   a. Assure lateral and vertical communication throughout the organization.
   b. Establish SOP and administrative instructions.
   c. Harmonize programs and policies by insuring balance among plans and actions.
   d. Promote intelligent cooperation and mutual understanding.
   e. Promote acceptance of organizational objectives and integrate action toward a common goal.

5. Controlling.

   a. Establish a basis for measuring performance.
   b. Collect necessary data.
   c. Review and analyze data.
   d. Determine need for action.

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Annex B (OPTIONAL PRACTICAL EXERCISE) to Memorandum 46-1

Name the functions of management and for each give an example of how it applies to a management situation with which you are familiar.

1.

2.

3.

4.

5.

Annex C (SOLUTION TO PE) to Memorandum 46-1

1. Planning.

2. Organizing.

3. Directing.

4. Coordinating.

5. Controlling.

NOTE: Above are the functions of management. Your examples will be in your field, so there can be no exact solution to them.

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Edition code-I

MEMORANDUM

46-2

PRINCIPLES AND POLICIES OF MANAGEMENT

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1. PRINCIPLES OF MANAGEMENT. A principle is defined as a fundamental statement or truth providing a general guide to action. A principle is a guide and must not be confused with a law, which is a relationship between cause and effect that (like the law of gravity) has always been known to give the same result. A principle is established as a result of experience; under ordinary circumstances the results are predictable. However, principles are flexible, not absolute, and must be usable regardless of changing or special conditions. George Washington, in his last public address, said, "Important principles may and must be flexible."

a. Management experts all agree that there are basic principles of management. However, they express them differently, and they are not in complete accord as to their relative importance or use. Annex A contains a list of management principles compiled from various publications. We shall not discuss these principles specifically or in detail; they are for the most part self-explanatory and are used in some form in all phases of management, in all types of organizations.

b. Ten basic principles of Army management are listed in AR 1-24, and these are the principles with which we are immediately concerned. As we discuss them, note how they parallel certain of the principles listed in annex A. These 10 basic principles should be clearly understood by all Army personnel who have administrative responsibilities.

(1) Principle of essentiality. All activities and actions must contribute to the mission of the Army. In setting up or surveying an organization or activity, the first consideration is an appraisal of its essentiality. Unless an activity is, in fact, necessary for the success of the operation, it should be eliminated, curtailed, or combined with other activities. This principle corresponds with the principle of simplicity, as listed in annex A.

The importance of this principle may be seen in an occurrence during World War II. At an Army installation a member of a management survey team asked a soldier why he was patrolling a certain corridor. The soldier shrugged, "Don't know. Someone is always on patrol here." It took several days of painstaking search, but the reason was finally discovered. Two years previously the floors of several of the rooms had been freshly painted, and a guard had been posted to see that no one entered them. After the rooms were again in use no one throught to remove the patrol.

(2) Principle of flexibility. Peacetime organizations and systems should be so designed that they are suitable for, or are readily convertible to, conditions of war or other emergencies. When an organization is formed, provision should be made for either expansion or reduction without major change in the basic structure.

An example of applying the principle of flexibility may be found in the organizational structure of the adjutant general section of the infantry division. The adjutant general section usually carries on its operations and activities in the division rear area but may also provide personnel to form an adjutant general forward team at the main command post. This is accomplished by using only assigned personnel; it does not materially reduce operational efficiency of the division adjutant general section, nor does it change the organizational structure.

(3) Principle of unity of command. Within an organization, each of the

specific activities or parts must be subordinate to the overall organization, and there must be only one boss at each level of command.

Let's see what happened in one case where this principle was violated. The adjutant at an Army installation knew that Miss Jones in the personnel office was very efficient and produced work of superior quality. One day, when his own secretary had an overly large backlog of work, the adjutant went directly to Miss Jones and asked her to take some dictation. He was so pleased with her speed and accuracy that several days later he asked her to do another job for him. Soon, she was spending several hours a day on work for the adjutant, and the personnel officer found that his own work (for which Miss Jones was hired) took second place. It was his office, now, that had a backlog of work.

Naturally irritated, the personnel officer took it out on Miss Jones, since he dared not be openly critical of his own boss. Finally, harassed and unhappy, Miss Jones asked for a transfer. The personnel officer received a low efficiency report because "he couldn't handle personnel," and the adjutant himself was criticized for allowing a subordinate officer to get so far behind in his work!

(4) Principle of communication. Management is dependent on an exchange of information and ideas, on understanding personnel and making itself understood by personnel. Understanding is made easier by using simple words and terms and by channeling information so that everyone has a knowledge of objectives, authorities, priorities, and standards of performance. Communication should extend through the organization from the top downward, from the workers upward, and on horizontal levels.

It is the responsibility of the sender to make sure his communications, whether written or oral, are clearly understood. A simple illustration of the importance of this principle is an incident at an Army installation where the adjutant was told to make arrangements for the commander to entertain 16 guests (official visitors) at lunch on Armed Forces Day. The adjutant phoned the officers' club, arranged for a special menu, and was assured by the club officer that everything would be taken care of. It was--except that the beautifully decorated table had been set and food prepared for 60 instead of 16 guests.

(5) Principle of responsibility. Decentralization or assignment of responsibility to a subordinate does not relieve the superior of the overall responsibility for performance. For instance, in the matter of the luncheon at the officers' club, the commander quite properly held the adjutant responsible. Even though the error was made by the club officer, the initial instructions had been given to the adjutant and it was his duty to make sure they were carried out.

(6) Principle of objective. Systems and organizational structures should be appropriate to the mission of the command. They should be designed so that objectives can be reached with the least possible expenditure of manpower and materials and so that each organizational element has a specific objective to attain or an end product to produce.

(7) Principle of improvement. Continual improvement in systems, methods, and use of resources is

required for continuing effectiveness in operations.

The Army Suggestion Plan is one of the activities based on this principle. This program encourages all personnel to look for better, easier, and more economical ways to do jobs, to increase morale, and to improve working conditions.

Any improvement program centers around a questioning attitude. It does not accept the past with its "This is the way we've always done it." Neither does it accept the present with its "This is the result of much study and planning; therefore, it cannot be improved." The questioning mind realizes that nothing is perfect; there is always room for improvement.

(8) Principle of review. Major changes in conditions or variations in resources necessitate a timely review and adjustment of objectives, policies, organization, functions, systems, priorities, and allocations to assure optimum balance in relation to mission.

(9) Principle of service. Service to users is the primary basis for evaluation of administrative and support activities. This corresponds to the principle of "Primacy of Service" in annex A.

(10) Principle of human relations. Recognition of human dignity, respect for people as individuals, and understanding of differences in capabilities are essential to effectiveness. See annex A for a restatement of this principle.

c. These basic principles are guidelines for action in all phases of Army management. You will note that they are referred to as principles of management. There are other principles which apply more specifically to certain functions of management, such as organizing. The most important of these are contained in annex A and are discussed in other memorandums.

2. MANAGEMENT POLICIES. The word "policy" has different meanings for different people--Webster's dictionary contains 11 definitions for it. Applied to Army management, a policy is a broad directive that guides an organization toward the achievement of objectives. A policy is similar to a principle in that it is a guide, not a law. It provides a standing answer to recurring questions. In a large organization it assures uniformity of actions among organizational segments.

Specific policies (listed below) in regard to Army management are established in AR 1-24. These policies are expressed in general terms; they do not direct detailed actions, but they form a framework within which the administrative officer must conduct his activities.

a. "The factors influencing decision on a proposed action should include an evaluation of the long-term effects of the proposal as well as the short-term advantages to be realized."

b. "Identifiable programs should be established to effect improved operations." The Army Suggestion Plan is an example of implementing this policy. Establishing and maintaining performance standards is another.

c. "Assignment of responsibility and delegation of adequate authority should be made to the lowest practicable level, with clearly defined lines of authority and responsibility, so that the individual responsible for each organizational element is identifiable and can be held accountable for performance." This policy should be followed, without exception, to the lowest supervisory level.

d. "Centralized control of decentralized operations should be limited to the extent required to establish priorities of centrally directed programs, allocate critical resources, and identify and correct basic deficiencies."

e. "Standardization is desirable to facilitate management, but standardization should not be carried to the point where it negates the benefits of nonstandardization or decentralization."

f. "Time and effort of those who manage should be concentrated upon changes from previously known situations; upon deviations from norms; and upon problems commensurate with their levels of responsibility." (This is called "management by exception.")

Failure to observe this policy causes a manager to complain that he is "snowed under" by details and paperwork. He is allowing his subordinate supervisors to come to him for decisions that should be made by the supervisors themselves. He is personally handling routine work that a supervisor could do equally well. It is as though the head of a family wouldn't let his teenage son mow the lawn simply because he might not cut the grass evenly.

g. "Subordinates should be afforded maximum opportunity to exercise initiative while having access to sufficient guidance upon which to base their decisions."

h. "Supervision should be primarily directed toward points which are critical to successful accomplishment of the objective."

i. "Realistic performance standards should be established to facilitate management."

j. "Committees are a useful tool of management; however, committee action will not be used as a substitute for command responsibility and decision."

k. "Areas of conflict between proposed and existing policies and systems should be resolved prior to the adoption of new proposals."

l. "Individuals or groups who contribute in an exceptional and outstanding manner toward achieving increased effectiveness and economy of operations should receive timely recognition and reward."

3. CHARACTERISTICS OF A GOOD POLICY. The policies listed above are guides for the entire Department of the Army. More detailed and specific policies are formulated by organizational elements at all levels of command, but they may not be in opposition to Army policies. They may supplement, elaborate, limit, or define, but they may not contradict.

Good policies are definite aids to a supervisor. They make his work easier because they steer his judgment and initiative into the proper channels. He has a clearer idea of what is expected of him and can judge more accurately whether his plans and actions will be approved or disapproved. Policies serve as precedents to guide him, and he does not have to operate on a trial-and-error basis. They help him coordinate his work with that of other supervisors and with the next higher echelon.

The supervisor formulates policies for his own area of responsibility, and he must know organizational and overall policies so that the ones he makes for his segment of the organization will be in accord. For instance, if it is a general policy of the organization to promote from within, the supervisor should have a training policy that will enable individuals to be ready for advancement when the opportunity arises.

Regardless of the level of command at which a policy is formed, there are certain characteristics it should have:

a. A good policy is stable. No one has any confidence in a policy that is subject to change without notice. A policy should be changed only when it can be proved it is no longer the best policy.

b. A good policy is flexible. It should not be affected by minor changes in conditions. A too rigid and too specific policy will soon become outmoded.

c. A good policy is understandable. It is neither involved nor complicated, and it is expressed in simple and clear language.

d. A good policy is realistic. It pertains to basic issues and attainable goals and does not attempt to deal with ideal situations or imponderables.

e. A good policy is sincere. It says exactly what it is supposed to mean and does not contain loopholes for misinterpretation.

f. A good policy is adhered to. A policy is set up as a guide for making decisions. If it is violated, it is of more harm than value. Often, the violations become precedents for unwritten policies that are not in accord with the objectives of the organization. When a policy has outlived its usefulness, it should be discarded.

4. THE ARMY MANAGER. Rapid technological developments and steadily increasing complexities of industrial and logistical operations demand a corresponding increase in the Army manager's knowledge and skills.

a. Many of the techniques and tools of management are different today from those of a few years ago, and although we shall not discuss them in detail, it must be pointed out that it is essential for the successful manager to know what they are and how to use them. Ability to use the following and similar tools of management may be classified as technical skills. Some of these tools are:

(1) Standard cost accounting.

(2) Motion and time studies.

(3) Production planning and control.

(4) Quality control.

(5) Plant and office layout.

(6) Management and manpower surveys.

(7) Inventory management.

(8) Financial management.

(9) Budgeting and programing.

(10) Automatic data processing systems.

b. In addition to the technical skills listed above, the manager must have perceptual skills. These skills are intangibles and are based largely on the innate or acquired abilities of the individual. Some of them are:

(1) The ability to weigh, evaluate, and select a course of action.

(2) The ability to solve complex

problems involving many factors and variables.

(3) Skill in public relations.

(4) The ability to develop subordinates.

(5) The ability to make decisions.

(6) Flexibility and adaptability to change.

Generally, perceptual skills are those which distinguish a good leader. Although they are usually considered innate abilities, an astute individual can evaluate himself and develop those qualities in which he is deficient.

c. In industry, the first line supervisor is sometimes considered below the management level. Army management, however, recognizes that the supervisor is the man in management on whom the worker must depend for satisfaction of his needs. The supervisor is the one who hands out the jobs, the overtime work, the assignments that lead to advancement, the training that enables the worker to advance, the promotions, and the transfers. He is the one whose moods set the temper of the day and whose actions and attitudes often determine a worker's future on the job. He is the channel through which the workers' wants are communicated to upper management and through which management's decisions come down to the workers.

(1) From the management angle, the supervisor is that member of management who carries the lion's share of responsibility for the handling of men. He is also responsible for maintaining discipline, meeting production schedules, creating and maintaining high morale, training his men, maintaining safety measures, the performance and maintenance of machines, and the efficient and economical handling of materials. He is the management member who carries out plans, interprets policies, transmits decisions, and enforces rules and regulations.

(2) The supervisor not only represents management to the men, but he must also represent the men to management. He is the only one who can provide management with a clear picture of what is going on at the bottom of the organization, and management depends on him for it.

5. ANALYZING PROBLEM AREAS. Let's consider a situation that is all too common in management. Assume that you are the chief of a large department in which most of the personnel are civilians. For some time you have become increasingly aware of widespread discontent throughout the department. There are excessive amounts of absenteeism, petty grievances, accidents, labor turnover, requests for transfer, and unfounded rumors. Production has fallen off in both quality and quantity. The installation commander has already heard of the situation and has ordered you to "do something about it." Your assistant advises you to call a meeting of the entire department and give them a pep talk, then tighten up controls by enforcing discipline and cutting down privileges, such as coffee breaks. Should you do as your assistant advises? No, decidedly not. At this stage a pep talk would probably have an adverse effect, and rigid disciplinary measures would scarcely raise morale. The important thing for you to do is find out what is behind their attitudes and actions. The sort of things that are happening in your department are almost always surface warning signals that something is seriously wrong. If you're smart, you'll find out what's behind these symptoms. Then you can tackle the disease instead

of making futile swats at the symptoms. Here's a good way to do it:

a. Check with supervisors individually to see how much they know about what's going on. This rash of trouble hasn't just happened; it was caused--by the organization, by you, or by other individuals in the department. It may be the result of internal rivalries; it may be traceable to some specific organization policy or action, or failure to give adequate consideration to employee needs. You need more facts before you can diagnose the real problem and begin action to correct it.

b. Doublecheck what the supervisors say by conducting an employee opinion poll. This will give you firsthand information about the morale of various groups and individuals. Use followup interviews to pinpoint the real causes of dissatisfaction.

c. Correct as many sore spots as possible, even the ones which seem quite unrelated to your specific problems.

d. The opinion poll and its followup will serve as a safety valve. It will allow the personnel to let off steam by telling you their pet gripes anonymously. It will help to convince them that you are sincerely interested in them and their welfare. You'll find that poor morale is most often compounded from a series of little gripes, exaggerated in their effect because management lets them go uncorrected. In such a situation, anyone can create big trouble out of the smallest incident. Take care of your molehills, and the mountains will disappear. In the majority of instances the key to your trouble will be found to be in your supervisory hierarchy. Weakness anywhere in management, especially at the first level, will create uncertainty and anxiety. This, in turn, will be translated into grievances. If these are not handled properly (and weak supervision rarely handles anything properly), the end result is personnel problems.

e. Management does not have an effective team if the supervisor is not on it. If the supervisor is not management minded--if he feels that he is outside management and his closest tie is to his men--he will not be doing his job of representing management to the men. He may even be antimanagement in his attitude toward, and interpretation of, organization policies, decisions, rules, and regulations. He may oppose plans and resist changes, and be interested only in showing that they will not work.

f. When such a situation exists, management must take steps to get the supervisor on the management team. He must be treated as a member and provided with those things that will enable him to perform as a member. He must have information of management plans and have it in advance and not from his workers or through the grapevine. He must know policies and understand the reasons behind them and how they operate; only then will he be able to interpret them to his men.

g. A supervisor must have the authority he needs to do his job, and he must know how far his authority extends. When there is an appropriate position vacancy, he should be considered for advancement to it before an outsider is brought in. If he doesn't have the required qualifications, he should be provided opportunities to get the education and training he needs to prepare himself for advancement.

h. Middle management, too, has these same needs--for information, authority, position, and opportunity--and to the extent that they are fulfilled the whole team is strengthened.

6. SUMMARY. Basic principles and policies of management are enumerated in AR 1-24. These should be known and understood by all managerial and supervisory personnel. They are guidelines for taking action or making decisions. While they are stated in broad terms, they are applicable to management at all levels.

7. SUGGESTED READING. The following publications are recommended for additional study.

AR 1-24, Army Management Doctrine, Nov 58
Industrial Organization and Management, R. C. Davis
The Fundamentals of Top Management, R. C. Davis
Principles of Management, G. R. Terry
Principles of Industrial Organization, D. S. Kimball & D. S. Kimball, Jr.
Principles of Business Organization and Operation, W. R. Spriegel
Principles of Management, Koontz & O'Donnell
Managerial Behavior, Leonard Sayles.

Annex A (PRINCIPLES OF MANAGEMENT) to Memorandum 46-2

Fundamental principles have been developed in the field of management over the years. As a guide, some of these principles are presented below as a supplement to the principles of military management.

1. Principle of Alternate Planning

When faced with alternate courses of action and after applying the principle of opportunity costs, you must take that course of action that gives you and the organization the greatest gain.

2. Principle of Analysis and Synthesis

Segregating the problem into its components and, in contrast, combining various entities under consideration assist in identifying and in establishing the relative importance of each factor of that problem.

3. Principle of Balance

To in[illegible]e greatest work accomplishment, a proper balance among the essential components of the entire activity is necessary.

4. Principle of Controlling

Controlling is an essential management activity because it helps assure that the goals of the planning and organizing efforts are and will be achieved.

5. Principle of Cooperation

Business is a cooperative effort in which many factors play an important part. It is not to the long-run interest of any of the parties of the business process that one of the groups should take advantage of another.

6. Principle of Coordination

The smooth blending together of all parts making up an entirety in order to obtain maximum contribution both in respect to each part and its relationship to the entirety is secured by means of coordination.

7. Principle of Decentralized Decisions

A decision should be made at the lowest level in the organization that has the requisite competence, authority, and prestige.

8. Principle of Definite Supervisory Channels

For any given enterprise, the various organization units should be connected by clearly defined supervisory channels so that the activities of each unit can be properly supervised by a single unit of the immediate higher organization level.

9. Principle of Delegation of Authority

Individuals should be given authority in keeping with their responsibilities; that is, when a man is made responsible for a job, he is given the "power" he needs to do it.

10. Principle of Discipline

Discipline is necessary to meet most work objectives, and discipline which is self-imposed is far more effective than discipline which is meted out by others.

11. Principle of Exception

Only the significant deviations of actual from planned performance should be brought to the attention of the responsible executive in order that his time and abilities may be conserved.

12. Principle of Fixed Responsibility

For any given period, an individual will accomplish most when responsibility for the completion of a definite task is fixed upon that individual.

13. Principle of Functional Growth

As a business grows, the various functions which must be carried on increase in their scope and complexity, as does also the amount of work that is necessary, and the technical requirements for its proper performance.

14. Principle of Functions

Functions are the main entities around which a manager builds an effective organization structure.

15. Principle of Homogeneous Assignment

Similar or related jobs should be grouped together in the organization, and personnel should be assigned to jobs in keeping with their experience and skills.

16. Principle of Human Relations

A manager's success depends in great measure upon the intelligent handling of human relations.

17. Principle of Ideals

No form of organized activity can continue successfully, over an extended period of time, without observing certain minimum standards of conduct; otherwise its members and those who must deal with it will lose confidence, and this will eventually result in a loss of effectiveness in some degree.

18. Principle of Integrity of the Line Organization

The usurpation of line authority and responsibility by staff may result in the failure of the mission, since the primary values that justify the existence of the organization are created in the line.

19. Principle of Leadership

Skillfully applied leadership contributes tremendously to smooth and successful group efforts.

20. Principle of the Limitation of Staff Economy

In order that the primary functions may be performed with maximum economy and effectiveness, the related secondary functions must usually be
p performed with less than maximum economy and effectiveness.

21. Principle of Multiple Hypotheses

The best solution is more likely to be found if two or more possible solutions have first been set up tentatively.

22. Principle of Objective

A clear and complete statement of the objective is essential, and it should be made known to all members of an enterprise affected by it so that management activities can be directed in a unified, orderly, gainful, and effective manner.

23. Principle of Opportunity Costs

The cost of taking one course of action is measured by that which was given up in order to take that course.

24. Principle of Organization

Organize around the work and not the people.

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25. Principle of Parsimony

That hypothesis is most likely to be correct which requires the fewest number of assumptions for the logical deductions of the required consequences of a correct solution.

26. Principle of Participative Management

Most people have a greater interest in an activity, and a keener appreciation of the benefits derived from it, if they participate in it actively.

27. Principle of Personnel

Maximum organization effectiveness requires effective personnel placement; each individual should be carefully selected and placed so that the requirements of the job and the abilities of the individual represent the best possible combination.

28. Principle of Planning

Planning should take place before doing; most individual and group efforts are made more efficient by determining before any operative action takes place what shall be done, where, when, how, and who shall do it.

29. Principle of Policy

Definite policies are essential to the successful operations of management.

30. Principle of "Primacy of Service"

Continued customer patronage depends on a satisfactory achievement of primary service objectives continuously over a period of time.

31. Principle of Probability

If one or more of the premises expresses a probability rather than a certainty, the conclusion can represent only a probability.

32. Principle of Sacrifice

People appreciate assistance in obtaining something they want badly, particularly when some sacrifice is involved; but giving them something for nothing may lower rather than improve morale, especially when the desire has previously been nonexistent.

33. Principle of Scientific Management

Thorough investigation, controlled experimentation, and careful interpretation of the resultant data provide a reliable basis for the determination and evaluation of facts used by managers.

34. Principle of Simplicity

Only functions which are absolutely necessary, related in a plain and forthright manner, and accompanied by clear statements of the authority and responsibility of persons charged with performing these functions should be utilized in the work of organizing.

35. Principle of Simultation

With increasing simultaneous performance of the phases of a project or projects, the overall time for the completion of the undertaking tends to decrease relatively, approaching the time of the longest phase as a limit.

36. Principle of the Situation

The successful solution of business problems depends in large part on the executive's ability to determine the facts, his courage to face them, and his ability and willingness to follow the course of action they dictate.

37. Principle of Span of Control

There is a limit to the number of individuals one supervisor can manage effectively. As the number of subordinates increase arithmetically, the number of relationships increase geometrically.

38. Principle of Specialization.

As a man concentrates his efforts, either mental or manual, his skill in his chosen speciality and the quantity of his product increase.

39. Principle of Standardization

Standardization provides definite patterns for operations and performances which contribute to efficiency and expedite controlling.

40. Principle of Unity of Command

The ultimate responsibility for and control of all actions directed toward the objective of an organization are vested in one individual at each level of operations.

Annex B (PRINCIPLES AND CHARACTERISTICS OF MANAGEMENT) to Memorandum 46-2

PRINCIPLES

1. All activities and actions are to contribute to the mission of the Army.

2. Peacetime organizations and systems should be designed so that they are suitable for or readily convertible to conditions of war or other emergencies.

3. Within an organization, each of the specific activities or parts must be subordinate to the overall organization.

4. Management is dependent upon an exchange of information and understanding. Understanding is facilitated by universal usage of terms, clear and freely used channels of communication, and mutual knowledge of objectives, authorities, priorities, and standards of performance between superiors and subordinates.

5. Decentralization or assignment of responsibility to a subordinate does not relieve the superior of the overall responsibility for performance.

6. Systems and organizational structures should be oriented toward the mission of the command and designed to insure

   a. That objectives are achieved effectively with the least resources.

   b. That each organizational element has a specific objective to attain or an end product to produce.

7. Continual improvement in systems, methods, and use of resources is required for continuing effectiveness in operations.

8. Major changes in conditions or variations in resources necessitate a timely review and adjustment of objectives, policies, organization, functions, systems, priorities, and allocations to assure optimum balance in relation to mission.

9. Service to users is the primary basis for evaluation of administrative and support activities.

10. Recognition of human dignity, respect for people as individuals, and understanding of differences in capabilities are essential to effectiveness.

CHARACTERISTICS

1. Purposeful.
2. An outstanding means for exerting real impact upon human life.
3. Usually associated with efforts of a group.
4. Accomplished by, with, and through the efforts of others.
5. An activity, not a person or group of persons.
6. Management effectiveness requires the use of certain knowledge, skill, and practice.
7. Intangible.

Annex C (SCHOOLS OF MANAGEMENT THEORY SUMMARY) to Memorandum 46-2.

1. The Operational School. This is the "universal" or "traditional" approach to management. Scholars from this school have attempted to establish universal generalizations about management. This was done by analyzing the management process, establishing a framework for it and identifying its underlying principles. This school concludes that management is a universal process, regardless of the enterprise. Research, testing and application of the principles involved in this process will lead to an improved practice of management.

2. The Empirical School. This school emphasizes the study of experience. By studying previous management mistakes, previous experiences of successful managers, and previous management problems, the manager can learn and apply the most effective management techniques. By knowing what did or did not work in past circumstances, the manager will be able to do the same in similar situations.

3. The Human Behavior School. This approach to the study of management is based on "how to deal with people." Since managing involves getting things done through people, the study of management should be centered on the interpersonal relationship of the people involved. In other words, this school of theory is concerned with the "people" involved in the management process.

4. The Social System School. This approach is very similar to the Human Behavior School. This school, however, sees management as a social system dealing with the complete cultural interrelationships of humanity. The management process is most useful after applying basic sociology and group behavior analysis to the particular social system.

5. The Decision Theory School. This school is composed mainly of economic theorists. It originally was concerned only with selection of courses of action from many alternatives, but it has now become more encompassing. Decision-making is done on a rational basis, often using the model building technique, to approach all management decisions.

6. The Mathematical School. This school feels that if the management process is a logical process, it can be expressed in terms of mathematical symbols and relationships. Mathematical models can then be built to deal with any problems that might arise. In addition to model building, quantitative analysis (linear programing, statistical analysis) is the technique most used by this school.

7. The Custom School. This school believes in managing as those before have managed. Managing in the customary manner, rather than innovating or applying new techniques and concepts.

Annex D (OPTIONAL PRACTICAL EXERCISE) to Memorandum 46-2.

Name the schools of management theory and enumerate the advantages and disadvantages of each theory. (For solution, see Annex C.)

Edition code–1

MEMORANDUM

46–3

THE FUNCTION OF PLANNING

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ANNEX

Optional Practical Exercise 11

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1. INTRODUCTION. Kipling once said:

> I keep six honest serving men,
> They taught me all I knew.
> Their names are where and what
> and when.
> And why and how and who.

These serving men didn't die with Kipling. They are still very much with us and will serve any man who cultivates their acquaintance; it is safe to say that to be successful in an enterprise a man must master them. This is particularly true in the field of management, where a manager's success depends on his knowing where his organization is going, what it must do, when it must be done, why it must be done, how it can be done best, and who is going to do it.

We have said that management is the process of establishing and attaining objectives to carry out responsibilities. In this definition there is the implication that there must have been an objective given by higher authority and that responsible individuals must use it as a basis for establishing the objectives of their segments of the organization. For example, training centers are established to provide basic training for Army personnel. That is their mission and overall objective. Within the training center each organizational element has its own objectives to meet, and these objectives must not be in conflict with the mission of the installation. For instance, the special services section is organized to provide morale and recreation services. It is not directly concerned with training, but if it achieves its objectives, it will contribute to the accomplishment of the training mission.

Management as a process is applicable at all levels of every organization, and there are specific functions that must be performed by managers. When viewed analytically these functions of management generally consist of planning, organizing, directing, coordinating, and controlling the work of others. In an operating agency these functions can be identified separately, but cannot exist separately. Planning must take organizing into account; conversely, organizing requires planning--an interrelationship and interdependency bind together all of the functions of management. In this regard there are two definite facts we can consider: planning must exist before performance of action, and planning provides the foundations for the other functions of management.

Planning is the most basic of all management functions since it involves selection from among alternative courses of action for the organization as a whole and for every element and person in it. Not only is planning a basic function for all managers at all levels in the organization, but the other functions of the manager depend on it. A manager organizes, directs, coordinates, and controls to assure the attainment of objectives according to plan.

2. PRINCIPLES OF PLANNING. The essential nature of planning can best be understood through four basic planning principles: the contribution to objectives, the primacy of planning, the pervasiveness of planning, and the efficiency of plans.

a. Contribution to objectives. Every plan and its result must contribute to the accomplishment of the organization's objectives. This principle stems from the nature of the organization, which exists for the accomplishment of group enterprise. Regardless of its other characteristics, a good plan is capable of accomplishing the objective.

Plans alone cannot make an enterprise successful. Action is required if the organization is to operate efficiently.

Plans can, however, predict which actions will lead toward the ultimate objective, which will lead away from it, which will probably offset one another, and which are merely of no consequence. Managerial planning is directed toward coordinating operations to obtain desired results. Without plans, actions are only activity which will most likely produce confusion.

b. Primacy of planning. Although all the functions of management are interrelated, planning establishes the objectives necessary for group efforts. Also, plans must be made to accomplish these objectives before the manager can know what kind of organizational relationships and types of personnel are needed, the manner and extent of direction they require, and what kind of control is most desirable.

Planning and control are inseparable--they have been called by some management experts the Siamese twins of management. Unplanned action cannot be controlled, since control involves keeping subordinates on course by correcting deviations from plans. An attempt to control without plans is meaningless; subordinates cannot do what a manager wants them to do without knowing what his wishes are. Plans, therefore, furnish the standards of control.

c. Pervasiveness of planning. Although all managerial functions pervade all managerial jobs, the pervasiveness of planning needs special emphasis. Planning is a function of every manager, although the character and extent of his planning vary with his authority and the nature of his superior's policies and plans. It is almost impossible to limit his area of choice to the extent that he can use no personal discretion, and unless he has some planning function he is not really a manager.

One manager, because of his authority or position in the organization, may do more planning or more important planning than another, or the planning of one may be more basic and applicable to a larger portion of the organization than that of another. However, all Army managers--from the general to the first-line supervisor--must plan. In fact, a major factor in the success of a supervisor is his ability to plan.

d. Efficiency of plans. A plan is efficient if it brings about the attainment of objectives without causing unsought consequences. Sometimes a plan contributes to the attainment of objectives, but at too high a cost in manpower, morale, money, and/or materials.

3. WHY WE PLAN.

a. Definitions of planning and a plan describe only the process and the product of planning; they do not touch on the mechanics of the process, nor do they mention the forces that cause us to plan and restrict our planning. These actuating and limiting forces are determined by the size and type of the operation, the people involved, and the facilities and materials required and available. For everyday, simple activities, such as planning our personal recreation for tomorrow, the initiating force is personal desire limited only by such things as distance, finances, and time. For complex activities, such as national industrial mobilization planning, actuation includes such forces as laws, decrees, and proclamations; and limitations are too vast and varied to enumerate here.

b. The answer to "why we plan" as individuals or as offices can be stated as "Planning is essential to the efficient running of any activity." Without planning there is waste and confusion. Military personnel plan their activities directly--

because they are specifically required to do so for a given purpose, or indirectly--because they are responsible for certain operations or activities and commonsense dictates there must be planning in order for the work to proceed smoothly.

A direct requirement for planning would be the case of a unit personnel officer who is assigned the job of setting up a training program for clerical personnel. This is a specific and direct requirement for him to plan an activity that is outside his usual scope of operations and which he may not be required to supervise personally. In his regular job assignment he has the continuing responsibility for seeing that the normal work of a personnel office is accomplished smoothly and efficiently. This, of course, involves an indirect requirement for planning the activities of his subordinates.

4. HOW WE PLAN. If a plan is a projected course of action and planning is deciding in advance what to do, then there must be a starting point and guidelines for developing the plan. To decide on the best course of action, it is necessary to study and evaluate all known circumstances and to consider alternate courses of action.

Planning consists of two phases: determination of all factors which might affect the proposed operation (in the military this is called the estimate of the situation) and preparation of the plan itself. In the determining phase there are two specific tools of management to assist you: forecasting and policy--which, in this case, are considered as plans made at a higher level.

a. Forecasting. Forecasting is looking ahead. -It is the process of assembling and analyzing data which will influence actions in a probable situation. A forecast is a statement of conditions or events that will affect actions at a future date. However, forecasting does not refer to reaching the objective, and it does not recommend a course of action.

(1) Forecasting is required both in advance of and in association with planning. Let's assume that you manage an Army training organization--higher authority has forecasted (planned) that your organization will have 1,000 men to train in a certian military occupational specialty (MOS) within a particular fiscal year (what is to be done and when it is to be done). At this time you should begin to develop a plan or plans to accomplish this objective, and you should enter into the first phase of planning; i.e., assembling data on such matters as facilities available and requirements for instructor personnel and supplies; analyzing and evaluating the data you have collected; and finally, determining the factors that will most directly affect and influence the training. From these actions you will make your own forecast, the basis for your planning to accomplish the training mission.

(2) The development of a forecast and the process of forecasting must be based on a careful analysis of the current situation and the projected requirements. A study of methods used in previous similar situations is valuable, as is consultation with others who have encountered such problems. However, such considerations are not completely reliable. One must always question WHY the past action was successful or unsuccessful and investigate whether changes in operating climate or conditions might affect future operations. Present and anticipated resources--facilities, equipment, manpower--must be evaluated, since any forecast would be invalidated if there were inadequate resources. Information gained from past experience and the opinions of others cannot stand alone; they must be

analyzed thoroughly and integrated with other factors. Some of the things which should be considered are proposed or approved budgets; probable or proposed changes in objectives; limitations of physical facilities; known or estimated production or work capabilities; and probable availability of personnel.

(3) When all data are assembled and the task of analyzing is completed, the development of the forecast becomes a matter of forward thinking and decision. The amount of detail in the forecast depends on the scope of the forecast, the amount of detail increasing as the scope decreases. The final product, the forecast itself, should be stated in simple terms, such as "Company A will provide rifle marksmanship qualification for 250 trainees during the month of July."

b. Policy. Equally important to the planning process, and necessary during the preparatory phase, are the statements of boundaries, limitations, procedures, and guidelines within which the operation is performed or to be performed. In military terms these statements are called policies. A policy is a broad directive that guides an organization toward the achievement of objectives, a considered decision made by the manager for the purpose of setting up a guide to future actions, or the written or oral authority that establishes continuing routine actions. In planning, guidelines are needed to limit the scope and extent of planning, and later on, elements of the organization will need these same guidelines to accomplish their specific objectives. As policies are formulated down through subordinate elements, they become narrower in scope and more specific in detail. Policy, in itself, is an expression of the exercise of the directing function by the manager. While all personnel may recommend the adoption of new policies or changes in old policies as the need arises, decisions on policy are the responsibility of the manager.

(1) The policies of an organization give meaning to the objective. The goal might be expressed in general terms which have small significance to the members of the organization. However, policies translate the goal into terms which are of direct concern to the individual. Policies make the goal more easily understood since they supply the general directives for attaining the goal. A good organization policy is based on a careful analysis of the organizational objectives; is precisely stated in simple terms; and is stable, flexible, comprehensive, complementary to equal authority, and supplementary to higher authority.

(2) We have discussed forecasting and policy within the preliminary phase of planning. Although discussed in sequence, the actual development of forecasts and policies does not necessarily follow the sequence. The development of a plan, forecast, and policy requires concurrent and interrelated actions; in the development of each, there comes a point where the other must be considered in order to continue action. For example, there are various ways that instruction in rifle marksmanship might be given trainees, and an organization charged with such training will necessarily need to decide which method to use. In the forecasting action, the policy as to how the organization will provide the training should be considered; to develop policy, one should know the forecast of such things as the number to be trained and the cadre available; and to develop a plan, it is necessary to know both policy and forecasts. There can be no absolute chronological sequence of actions in the performance of the planning function.

c. Need for policy. In addition to serving as a guide for planning and a means of orientation for the new commander or member, policy provides the following aids:

(1) It saves time, because the same decisions need not be made over and over. Approval or disapproval of major projects and decisions on exceptional matters are recorded as policy for the organization.

(2) It indicates responsibilities and authorities, but does not state fixed operational actions. Policy is important to decentralization of management authority, because by following it subordinates proceed along an approved course of action.

(3) It helps to insure consistency of action. Since it provides guideposts for planning, it helps to keep all elements of an organization moving in the same direction at the same time.

(4) It provides the necessary direction for concurrent planning by giving subordinate units a framework within which they may prepare their preliminary plans prior to the receipt of the completed plan from higher authority.

d. Policy development. Policy doesn't just happen; it requires careful consideration and employment of the principles of management, and exercise of some or all of the functions of management. Again, there are phases in the development process, and many concurrent actions should be performed before the final product, a policy, can become a guide toward the achievement of organizational objectives. The phases of the development process include the following:

(1) Formulation. Decide on governing concepts. Analyze objectives. Make an analysis of activities of the organizations; their nature and the course and rate of growth of the organization are involved.

(2) Promulgation. Disseminate the policy to the level(s) where it is to be used and applied. Timing, evaluation, and decision as to methods of communication are required.

(3) Education (selling). Confer with subordinates before final promulgation; the policy should be understood by all concerned. Some policies fail because various people reading the same policy may arrive at different conclusions as to its meaning. Also, many policies fail because they are not wholeheartedly accepted. Acceptance is more than lip service and outward compliance; there is still the problem of overcoming personal objections. If there are dissenters and nonconformists within the organization, the policy may not be sound or it may not be thoroughly understood by those directly affected.

(4) Application. Use coordinate and subordinate personnel to help make managerial and operative decisions. Decisions are most generally accepted when those who are directly affected have had a hand in making the decisions.

(5) Interpretation. No policy can be written to cover every situation and eventuality, there are exceptions to everything. Interpretation is usually the responsibility of the immediate operating manager, but final decisions on questions of interpretation rest with the manager who issued the policy. The educational phase does not completely cover this phase of interpretation.

5. STEPS IN PLANNING.

a. The first step in planning is to determine the precise purpose of the plan. You are the manager. You must realize that before you can produce an effective plan, you must clearly define the objective. The objective should, in fact, constitute a goal toward which the individuals in the organization can direct their efforts. This first step in the preparation of a plan is basic and elementary, the key to any plan. The objective is usually simple to determine, but it is often difficult to pinpoint in a statement. An objective can be set by necessity, decree, or agreement, and it is here that forecasts and forecasting become so important, since they state precisely what may be anticipated.

b. The second step of planning is the determination of the course of action. This is accomplished partly by the action of forecasting and partly by the action of developing policy, but neither forecasting nor policy provides for deciding on the course of action. Here you face the problem of "how it is to be done" and must make a decision. You should weigh opportunity costs and the possible courses of action that might achieve the objective, and then choose the course of action to be followed by the organization. Others may recommend, others may gather facts, others may evaluate, but you, the manager, make the final decision. Before you make your final decision, you should carefully consider alternative courses of action. You should consider at least two possible solutions (excluding those few cases where there is no alternative), and your selection should be the one which is based on the most facts and fewest assumptions, and which may be expected to yield the greatest gain with the least expense. Also, the chosen course of action should be the one which fits best within organizational policies and procedures.

c. The third step in the preparation of a plan is to establish the procedures. In tactical situations a specific format is used, and the plan is called an operation order or administrative order. In other instances the plan itself may take the form of written orders, directives, memorandums, letters, or regulations--the specific format is relatively unimportant. In any case the plan should provide answers to the following questions:

(1) WHAT is to be done? (The objective.)

(2) HOW is it to be done? (Method.)

(3) WHERE is it to be done? (Location.)

(4) WHEN is it to be done? (Scheduling.)

(5) WHO will do it? (Personnel.)

d. After you complete the plan and before it is distributed to subordinate and using elements of the organization, you should check it to determine if it includes as many of the following factors, or information concerning them, as are necessary for its success:

(1) Resources to be used (including funds).

(2) Agencies, departments, or individuals involved.

(3) Coordinating agency(ies).

(4) Outside cooperation or assistance needed.

(5) Assumptions to be considered.

(6) Progress reports to be submitted.

(7) Time phasing of program(s).

(8) Anticipated trouble areas.

(9) Final objective to be attained.

(10) Priority.

The plan, when completed, should be distributed to subordinate elements for implementation and execution. During this stage, the directing, coordinating, and controlling functions of management will come to the fore and continue until the objective has been accomplished.

6. CHARACTERISTICS OF A GOOD PLAN.

a. It is capable of accomplishing the objective. Is your plan workable? Can it accomplish the objectives of the proposed operation? If it cannot, then it is not a good plan.

b. It is based on facts. In your plan have all pertinent data been considered? Are the data accurate? Have assumptions been reduced to the minimum?

c. It uses existing resources. Does your plan make full use of available resources? Are any organizational resources not being used? Are there any resources available which should be used?

d. It provides for the necessary organization. Does your plan clearly establish relationships and fix responsibilities?

e. It provides for continuity. Does your plan provide for an organization, for personnel, and for materiel? Does it cover the full period of the contemplated operation? Have provisions been made for continuous coordination?

f. It provides for decentralization. Does your plan delegate authority to the maximum extent consistent with retention of the necessary degree of control?

g. It provides for direct communication. Does your plan permit coordination during execution by means of direct communication between coequals and counterparts on all levels? Does it also provide for communications up and communications down? Are you sure that everyone concerned will understand his part in it?

h. It has simplicity. In your plan, have all nonessential elements been eliminated? Have all elements been reduced to their simplest forms?

i. It has flexibility. Does your plan leave room for adjustment to changes in operating conditions? Are alternative courses of action provided? Plans have a tendency to cause people to operate in a groove--the groove of the plan. To the extent that it helps a manager with limited knowledge, skill, or initiative to conduct an operation in a satisfactory manner, it is good. To the extent that it restricts the initiative of a knowledgeable and skillful manager, it is bad. Plans permitting little freedom of action may be excellent for one organization but poor for another because of the differing capabilities of their managers.

j. It provides for control. Do adequate means exist, or have they been provided, to see that your plan is carried out as it should be?

k. It is clear, concise, complete, and coordinated. Is your plan simply stated, and will it be clearly understood by all concerned?

7. ORGANIZATION FOR PLANNING. At all organizational levels there are provisions for planning personnel within the work force, though in many cases these provisions consist merely of placing responsibility for planning on the manager. However, even at the lowest echelon the manager can establish procedures and assign personnel to assist in the planning functions within his own area. There are four fundamental methods of organizing

for planning: using the existing organization without change; creating a permanent planning committee; creating an ad hoc committee; using a combination of two or more of these methods.

a. Use of the existing organizational structure. This method is used in all regular operations of the organization. Each member contributes to the overall plan within his sphere of activity. The personnel contributing to the planning remain in their usual assignments and locations and coordinate by means of conferences or other forms of communication.

b. Creation of a permanent planning committee. In this method the function of planning is assigned to a committee created for the one purpose of carrying out the major planning for the organization. Other agencies of the organization are relieved of all but short-range planning responsibilities and concentrate their efforts on current operations. This method has the advantage of concentration of effort along with clearly established responsibility for the function, and lends itself to easier direction and control. The disadvantages are those of creating one more agency to supervise and coordinate, of making a clear-cut division between future and current planning, and of running the chance that the planning section may fail to keep abreast of current operations and thus not be aware of available current data that would have an effect on future planning.

c. Creation of an ad hoc (temporary) committee. This method is frequently used to resolve a specific problem or devise a specific plan of action. The committee is composed of personnel who are assigned to regular duties in the organization, but are detached from their usual duties for the period of time required to produce a particular plan. An example of such a committee is that created by a post commander to plan the activities for Armed Forces Day.

d. Use of a combination of methods. An example is found in the practice of assembling a planning section to work on certain aspects of the plan, upon completion of which the planners return to their own sections to do their part of the overall plan, thus using the existing organization.

8. RESULTS OF POOR PLANNING. Planning is not restricted to one-time, or major, operations. It applies to daily actions and to routine as well as special activities. Lack of planning in this area can be disastrous to a manager. If management does not plan, or if it does not plan wisely and well, efficiency is seriously affected. It is easy to define planning, but planning itself requires effort. It requires thinking and reasoning--processes most people like to avoid. It is easier to use the trial-and-error method than to analyze and weigh advantages and disadvantages. It is easier just to do what seems best at the time, keeping busy at the jobs as they occur, than to sit down and plan how to get more done and yet be less busy.

Planning requires knowledge, foresight, judgment, and experience. The planner (manager) must know his personnel; he must know their skills, aptitudes, abilities, and shortcomings. He must know the facilities, equipment, and materials he has to work with. He must know how to break big jobs down into little ones.

A manager or supervisor who is a poor planner is always at a disadvantage in an organization. Unfortunately, he himself does not always recognize that many of his difficulties and problems stem from lack of planning. However, the results of poor planning are numerous and are glaringly evident to the experienced eye. A supervisor should suspect poor planning, or lack of planning, is his trouble if he is "snowed under" with work; if his personnel cannot meet deadlines; if there is confusion and discontent among his personnel; if work is slowed down because of insufficient or inferior equipment, tools, or materials, or incompetent personnel; and if his personnel are so rushed that they can't do good work. The specific evidences of poor planning include:

a. Machines and equipment unused for overlong periods.

b. Poor maintenance of machines and equipment.

c. Excessive backlog of work.

d. Files improperly maintained. Difficulty in locating material.

e. Materials wasted. Too many expendable supplies used in proportion to the amount of work produced.

f. Some individuals overworked, some underworked.

g. Quarreling and bickering among personnel.

h. Skilled personnel doing work that could be done by unskilled.

i. Individuals producing inferior work due to lack of training.

j. Too much overtime.

k. Too many "peaks and valleys" in workloads.

l. Excessive tardiness and absenteeism.

m. Work stoppages due to shortage of supplies.

n. Discontent due to lack of promotion opportunities.

o. Disorderly work areas; high accident rate.

p. Too many inaccuracies; too much work having to be redone.

9. BENEFITS OF GOOD PLANNING. When a manager is a good planner, the work in his unit is accomplished quickly, smoothly, and accurately. Personnel are busy, but not rushed. There is cooperation and harmony among the personnel. Working areas are orderly and uncluttered, and the accident rate is low. There is liking, admiration, and respect for the manager, and personnel willingly follow his leadership. Some of the benefits of good planning are:

a. Work is completed on time.

b. There is a good relationship with other departments.

c. People are working on jobs they can do best.

d. Workers know how their jobs relate to the mission of the organization. They know that their work is important and essential.

e. There is little waste of manpower or materials.

f. Machines and equipment are used to the best advantage.

g. Work meets prescribed standards of quality.

h. There is an atmosphere of friendliness, cheerfulness, and cooperativeness.

The difference between good planning and poor planning is the difference between order and confusion, between work being done on time and not being done on time, between harmony and conflict, and, incidentally, between a good efficiency rating and a poor efficiency rating.

Planning is to the manager as routing a trip is to the traveler. The traveler has a certain destination to reach, and he must determine the best way to get there. Usually, there are various routes open to him; unless he plots his trip in advance he may travel secondary or dead-end roads, run into time-consuming and rough detours, encounter roadblocks, take wrong turnings and have to backtrack before he can advance, and, of course, spend far more time, money, and effort than he should have done.

10. SUMMARY. Well-prepared plans are the basis for the organizational structure and for the operations of the organization. During the planning process, the manager analyzes the situation to determine what is to be accomplished. When he has clearly defined the objective, he determines and evaluates alternative courses of action, then develops policies and procedures within which the plan will be implemented. Next, he establishes measurable goals, the sum of which will accomplish the objective; and finally, he develops a plan that will implement the course of action selected.

The astute manager realizes that planning must be used as a bridge to the future, not as an end in itself. Each plan is a steppingstone to other plans and other actions. He realizes that planners must be realistic and recognize the many limitations of both current and future situations. Planning must not throttle the Army manager or the organization, but must permit flexibility to conduct operations based upon valid policies. A plan must express and encourage the exercise of initiative by all concerned. Planning is the framework for the control of action.

Annex (OPTIONAL PRACTICAL EXERCISE) to Memorandum 46-3

From the members of your group select an ad hoc committee or, if this is not feasible, you develop a plan for the reorganization of your section or company. Define the objectives, develop and evaluate alternative courses of action, and develop policies and procedures to implement the plan. Build flexibility into the plan to allow for future changes and modifications.

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Edition code-1

MEMORANDUM

46-4

THE FUNCTION OF ORGANIZING

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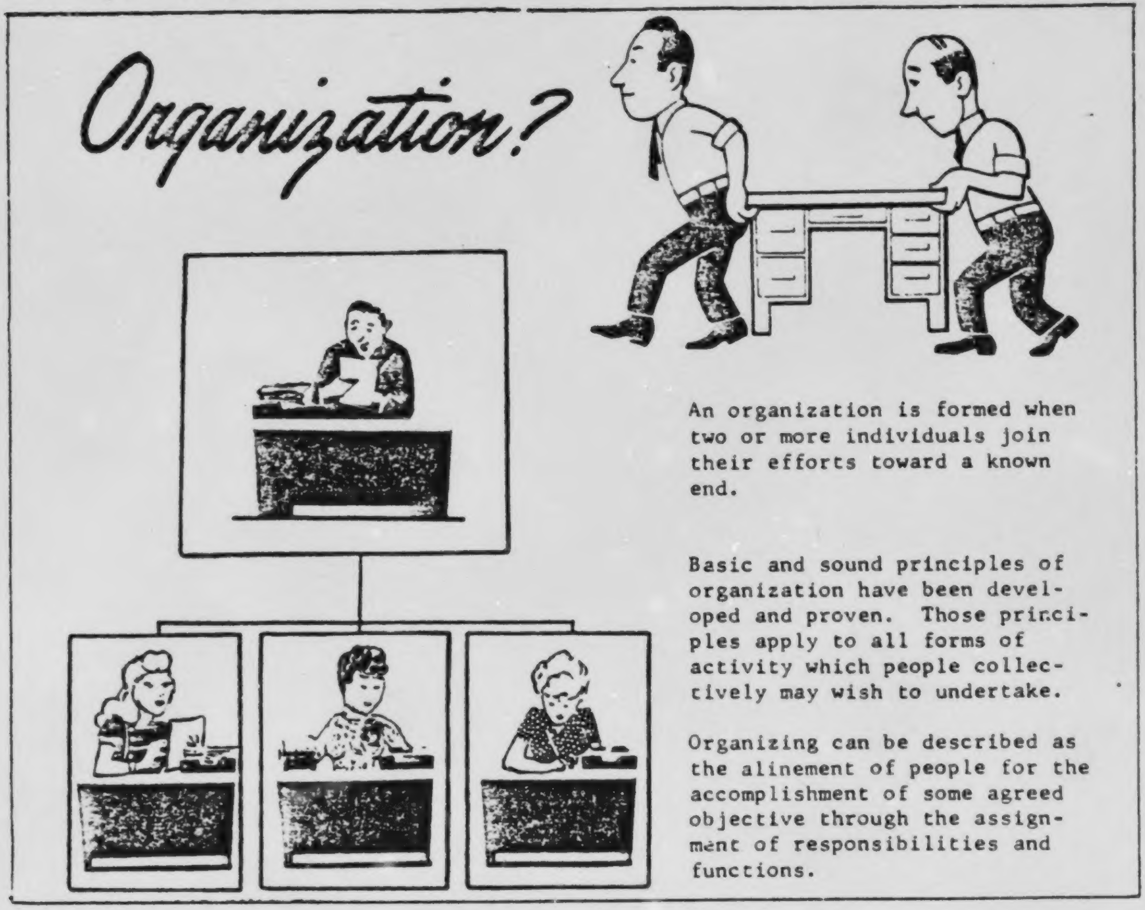
1. INTRODUCTION. It is generally recognized that objectives must be established, policies set, and plans formulated through good management. Planning is the first step in the management cycle, but planning is of no value unless it is followed by action. The planning a manager does is based on the fact that there is a job to be done and the assumption that people are, or will be, available to do it. The plan he develops, however, is inanimate. He must bring it to life. To do this, he must arrange and allocate his physical resources (facilities, equipment, materiel, money) so that his human resources (personnel) can use them to the best advantage. He must organize (fig. 1).

Organizing is the process of bringing together the work, the worker, and the work place. Whenever two or more people work together, there is some sort of organization; there is an arrangement of tasks and duties showing how their positions fit together. There is no basic difference between organizing a small unit and organizing a large department consisting of a number of units. The same principles and procedures apply at all levels. Our discussion, therefore, will deal with the broad aspects of organizing and will apply to management at all levels, down to and including the first-line supervisor. Although the supervisor may not be directly concerned with all of the phases of organizing, he must


Organization?

An organization is formed when two or more individuals join their efforts toward a known end.

Basic and sound principles of organization have been developed and proven. Those principles apply to all forms of activity which people collectively may wish to undertake.

Organizing can be described as the alinement of people for the accomplishment of some agreed objective through the assignment of responsibilities and functions.

Figure 1. Organizing.

understand them and must know the organization as a whole in order to understand where he fits into it. The organization as a whole and every part of it should be judged in the light of how well it contributes to the overall objective.

The proper arrangement of the work and the personnel into logical groupings promotes effectiveness of the unit or office. Efficiency, good morale, job satisfaction, and high production go hand in hand with effectiveness. Any organizing effort, therefore, is a matter for the earliest consideration of the manager if maximum effeciveness is to be obtained.

2. CONSIDERATIONS PRIOR TO ORGANIZING. To many people, the word "organizing" is synonymous with "planning." They say, "Organize your thoughts" or "Organize your daily activities," when they probably mean make a plan or follow a projected line of action. As applied to management, however, organizing refers to the process of establishing relationships among men, tasks, and materiel to carry out the plans of the manager; i.e., to achieve organizational objectives. In setting up an organization, there are certain fundamental concepts which must be understood clearly, since they have a decisive influence on the effectiveness of the unit.

a. Group association. Within every formal organization there may be one or more informal organizations. These groupings are not formed by management; they grow simply because people carry their social lives into their work lives. People band together because of common interests--in hobbies, in children, in religion, in sports and recreation, or in work. An individual brings to his job his own interests, desires, and emotions. He wants to associate with and be accepted by his fellow workers. He wants to fit into a group and have a feeling of belonging.

The successful manager recognizes that the informal organization has a great influence on the amount and quality of work that is produced. Within any group--working or playing--there is a natural leader who sets the pace and creates, or encourages, the attitudes and opinions of the rest of the group. This natural leader may or may not be the assigned leader. The group as a whole can make the manager appear either efficient or inefficient. When a manager studies and analyzes his informal groupings and their leaders he will understand how they operate. He will know what circumstances and feelings influence their attitudes. He will then be able to introduce changes, issue instructions, and direct activities in a way that will create the most acceptance and the least antagonism in the group.

b. Division of work. Groups move more quickly toward their goals when there is a fair and even distribution of work.

c. Delegation of authority. Division of work among members of a unit makes it necessary for one person to assign and supervise the work and the workers, and this person must have authority to make decisions in keeping with his responsibilities.

d. Creation of specialists. As the complexity of the group activity increases, some actions cannot be left to the group as a whole, but must be assigned to specially qualified individuals.

e. Division of authority by specialization. Special activities tend to develop into separate organizational elements, to the heads of which is delegated managerial authority over all problems within their special areas regardless of where they arise in the organization. In business, purchasing of raw materials and such items as office supplies, tools, and machinery is an example of a special activity, and many companies require that all buying be done by the purchasing element regardless of what the item is and where or how it is to be used.

f. Coordination. Whenever authority is divided, coordination is essential. Subordinate supervisors sometimes lose sight of the overall objective, and it is the responsibility of the manager to keep the entire organization headed toward the objective.

3. PRINCIPLES OF ORGANIZATION. The above listing of fundamental concepts is representative, but not all-inclusive, of the things to consider in determining the organizational structure. Many of the principles of management must be applied in the function of organizing so that the product will be the result of study rather than trial and error. Broadly speaking, all the principles of management may be related to organizing, but some of them are so specifically a part of and essential to effective organizing that they are called principles of organization. These are the principles of unity of command, span of control, homogeneous assignment, and delegation of authority.

a. Unity of command. Unity of command means that responsibility for and control of all actions within an organization are vested in one individual at each level of operation. At each level there is only one manager who is totally responsible for the element, and the net effect is that every person knows to whom he reports and whom he directs.

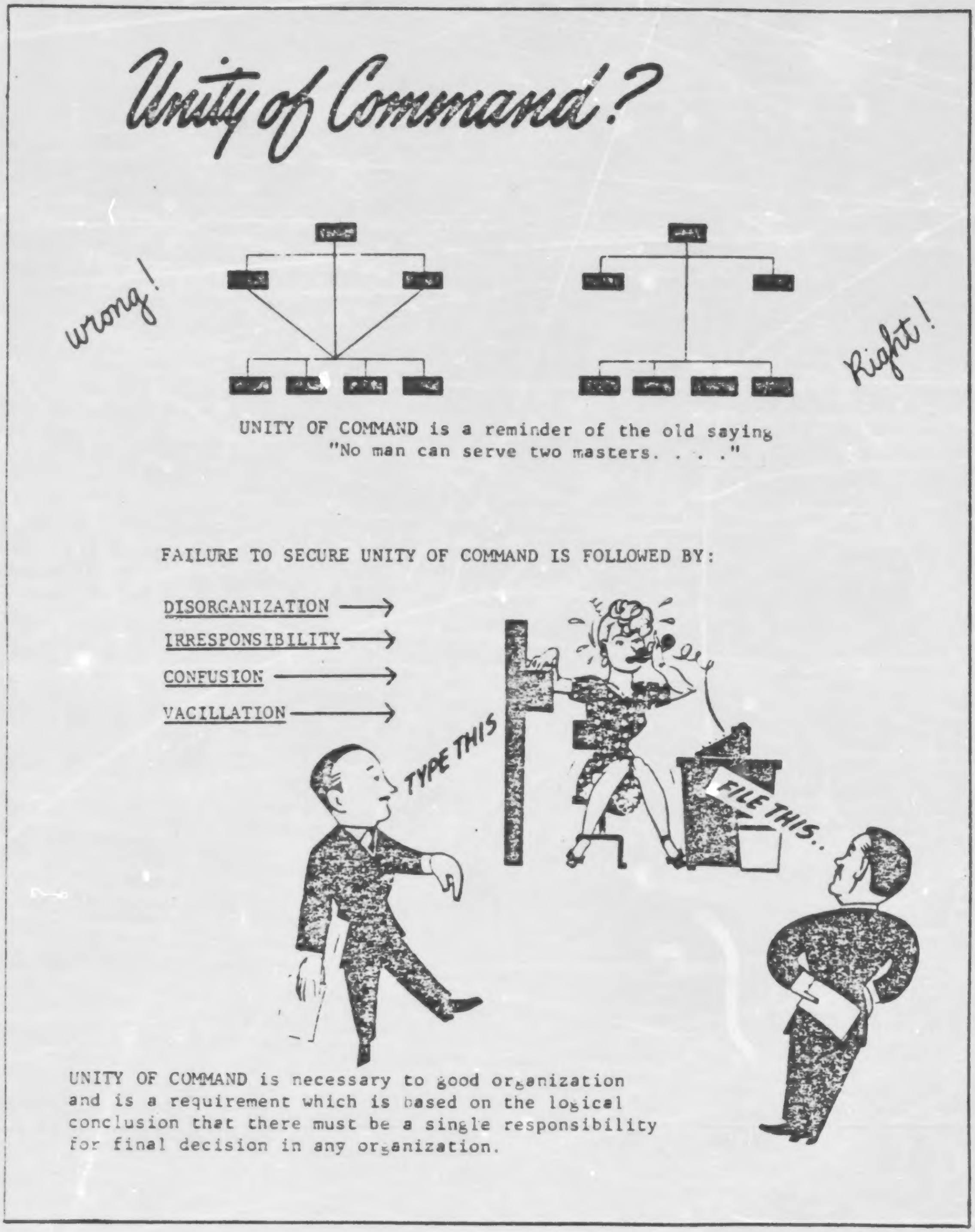
(1) In the Bible, Matthew 6:24, is the statement, "No man can serve two masters. . . ." This statement has become an axiom which is applicable to organization today. In order to do his job, each individual (including supervisors) must know to whom he reports, from whom he receives instructions, and to whom he reports results.

(2) Another old saying, "Too many cooks spoil the broth," is equally pertinent. To avoid "spoiling the broth," the manager must know who works for him, whom he directs, who aids him, and who is responsible for each task.

(3) To insure unity of command (fig. 2), all lines of communication should be as short as possible, definite, clear-cut, and understood by all. Also, it is important to remember that lines of communication should not be bypassed. For the person bypassed, there is confusion; he no longer knows whom he directs, since his subordinates are receiving orders from someone higher. He cannot reasonably be held responsible for the actions of his subordinates when he does not know what orders they received. As for the subordinate with "two masters," which superior does he obey? To whom does he owe primary loyalty? Once unity of command is established, it must be maintained. One way a manager can do this is by making frequent personal inspections augmented by the publication of a functional list of duties and responsibilities of all managers within the organization.

(4) In summation, the principle of unity of command consists of a single idea: one boss at each level. This has two corollaries: each individual must know to whom he reports, and each manager must know those whom he directs or for whom he is responsible.

b. Span of control. The problem of how many individuals one person can control (or manage) effectively is as old as


Unity of Command?
wrong!
Right!
TYPE THIS
FILE THIS..

UNITY OF COMMAND is a reminder of the old saying "No man can serve two masters. . . ."

FAILURE TO SECURE UNITY OF COMMAND IS FOLLOWED BY:

DISORGANIZATION →
IRRESPONSIBILITY →
CONFUSION →
VACILLATION →

UNITY OF COMMAND is necessary to good organization and is a requirement which is based on the logical conclusion that there must be a single responsibility for final decision in any organization.

Figure 2. Unity of Command.

management itself. An excellent illustration of this may be found in passages in the Bible that deal with Moses organizing the exodus of the Israelites. In Exodus 18:17-26, Moses' father-in-law, noting that Moses was spending most of his time giving counsel to many individuals, said to him:

"The thing that thou doest is not good. Thou wilt surely wear away, both thou and this people that is with thee: for this thing is too heavy for thee; thou art not able to perform it thyself alone. Hearken now unto my voice, I will give thee counsel. . . thou shalt provide out of all the people able men . . . and place such over them [the people], to be rulers of thousands, and rulers of hundreds, rulers of fifties, and rulers of tens. And let them judge the people at all seasons: and it shall be, that every great matter they shall bring unto thee, but every small matter they shall judge: so shall it be easier for thyself, and they shall bear the burden with thee. If thou shalt do this thing, and God command thee so, then thou shalt be able to endure, and all this people shall also go to their place in peace."

Moses followed his father-in-law's advice. He: ". . . chose able men out of all Israel, and made them heads over the people, rulers of thousands, rulers of hundreds, rulers of fifties, and rulers of tens. And they judged the people at all seasons: the hard causes they brought unto Moses, but every small matter they judged themselves."

(1) Application of the principle of span of control is the process of limiting the number of direct subordinates and the area of supervision, and of budgeting time so that all duties are performed within the time span normally available to a manager. If the principle of span of control is conscientiously applied, the workload can be placed under effective control and handled without difficulty. There are four basic factors which must be considered in applying this principle: (a) the complexity of the work, (b) the capabilities of the supervisor and the workers, (c) the distance between the superior and his subordinates, and (d) time.

(2) Many management experts say that the number of subordinates a superior can manage effectively is usually four to eight at the upper levels of management and eight to fifteen or more at the lower levels. Other students of management use different maximums and minimums, but they generally fall within these ranges. As stated above, there are many variables which influence the span of control, and any figures given can be only a guide. The basic problem is the number of direct relationships with which a manager is involved. If he has only one subordinate, there is only one direct relationship; if he has two subordinates, there are three direct relationships; if he has three subordinates, there are six (fig. 3).

(3) The French management consultant, V. A. Graicunas, holds that in addition to the direct single relationship there are two other superior-subordinate relationships: direct group relationships, and cross relationships. Moreover, he says that the relationships can be considered on a minimum and maximum basis. According to Graicunas' theory (fig. 4), in the case of a manager with two subordinates, at the minimum base there is a total of four relationships, and at the maximum base a total of six. The results show a marked rise in total relationships if there are more than 4 subordinates; e.g., for 4 subordinates the total number of relationships on a minimum basis is 21, on a maximum basis, 44; for 5 subordinates, 41 and 100, respectively; and for 12 subordinates, 4, 101 and 24, 708, respectively. Graicunas

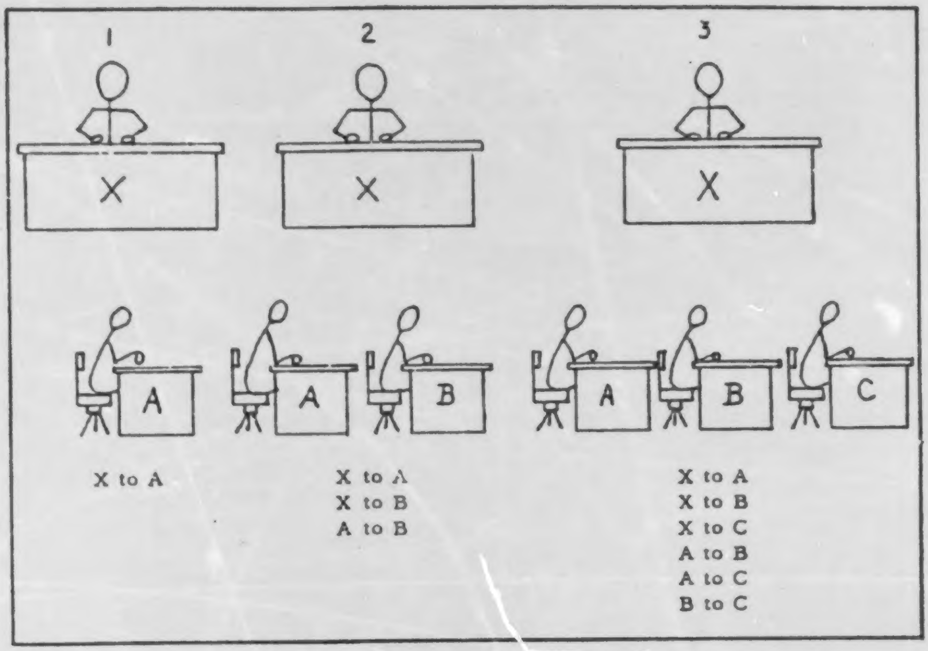

1
2
3
X
X
X
A
A
B
A
B
C
X to A
X to A
X to B
A to B
X to A
X to B
X to C
A to B
A to C
B to C

Figure 3. Direct Relationships.

Minimum Base:
Direct Single Relationships 2
X to A, X to B

Cross Relationships 1
A and B

Direct Group Relationships 1
X to A and B
4

Maximum Base:
Direct Single Relationships 2
X to A, X to B

Cross Relationships 2
A to B, B to A

Direct Group Relationships 2
X to A with B
X to B with A
6

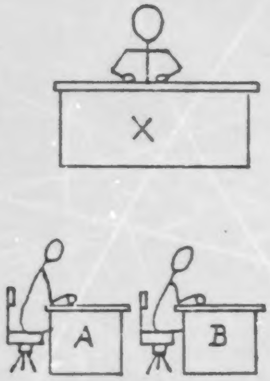


Figure 4. Graicunas' Theory.

assumed it was possible for one manager to give adequate attention to a maximum of 12 cross relationships and 28 direct group relationships (the totals for 4 subordinates); therefore, strict application of this theory would set the span of control at 4.

(4) Regardless of how you measure manager-subordinate relationships, an arbitrary limitation based purely on numbers cannot be applied to every situation. There must be an analysis of the kind of work the subordinates perform. If the work is simple and identical, one man can readily supervise relatively large numbers. However, each increasing instance of human relationships can create additional problems.

(5) Space and distance enter into span of control because the physical area of supervision, including the location of subordinates and activities, influences ease of managing. If the activities to be supervised require frequent personal contact, you should consider your accessibility to these activities when you locate them. Their distance from you will have considerable bearing on how well you are able to do your job. There are two extremes to avoid in locating subordinates or activities. It is just as unwise to locate a subordinate too near as too far away. Having the subordinate too close may result in oversupervision. It is a natural tendency for a person to supervise more closely those persons who are located nearer to him. This oversupervision may interfere with the work of the subordinate and stifle him to such an extent that he becomes the man who does only what he is told to do and little else. On the other hand, having a subordinate too far away may result in undersupervision, and the subordinate may begin to operate independently to such a degree that supervision becomes perfunctory.

It appears, then, that the ideal distance between the manager and the subordinate is that distance which minimizes both oversupervision and undersupervision. With the advanced means of communication used today, this principle may be applied at various echelons. If close physical supervision is required continuously, the emphasis should be placed on locating activities so that supervision is made as easy and economical as possible. In higher echelons the emphasis may need to be placed on geography, transportation, supply, and other aspects which affect the movement of materiel and personnel.

(6) Another factor affecting span of control, time, refers to the time it takes to supervise, to transmit orders through the levels of the organization, to give approvals or make decisions, and to correct and control operations.

(7) Closely related to the time factor is the skill and ability of both the manager and his subordinates. If the subordinates are relatively untrained, they need closer supervision. If they are knowledgeable and highly skilled, it requires less time to direct their activities.

(8) All the factors influencing span of control are interdependent and interrelated; one cannot be changed without a corresponding change in another. It must be realized that the smaller the span of control, the longer the chain of command and the greater the number of levels (fig. 5). This can result in the "top" managers' having inadequate knowledge of what is going on at the lower echelons. These managers must judge people whom they really do not know, and the people in lower management have no real opportunity to make themselves heard. There are forces tending to increase the number reporting to the chief manager; for example, some intermediate managers want to have

SPAN OF CONTROL....

1 The manager of a large organization does not have time to personally contact all units or elements of his organization before making decisions that affect its operation.

2 A supervisor can operate better if he is responsible for only those activities that one person can direct efficiently.

3 The phrase "span of control" implies the limitations existing in supervision and coordination by one individual.

4 Poor results can be expected when the attention of one individual is spread over too many activities.

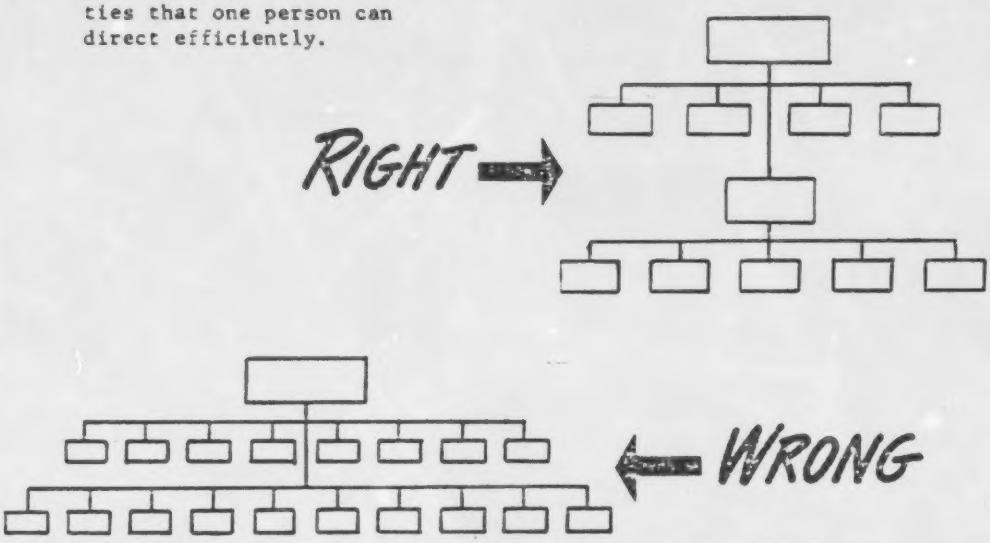


Figure 5. Span of Control.

access to as high a level of management as possible, believing this to be a means of advancement and a sign of status. Again, the manager himself may lack faith in the ability of his subordinates, fear possible rivals, or feel a desire for power as shown by the number of people reporting to him.

c. Homogeneous assignment. Homogeneous assignment is the process of grouping together like or related tasks and activities within the organizational structure. Similar or related jobs should be grouped together in the organization, and personnel should be assigned to jobs in keeping with their experience and skills. The value of this is apparent: a man who concentrates his efforts, either mental or manual, on a certain endeavor increases the quality and quantity of his work, and thus increases his skill. Because of the separate purposes of homogeneous assignment, there are two phases on the application of this principle: the structural phase and the personnel placement phase.

(1) In the structural phase, the principle is applied to the oraganizational framework; i.e., the arrangement of job relationships within the formal organization. In the personnel placement phase, the principle is applied to the personnel who are to be assigned to the jobs. The key to this principle is found in the derivation of the word "homogeneous." The first part of the word is from the Greek word "homos," which means like or similar; the latter half from the Greek word "genos," which means family, race, or kind. In the application of the principle, three factors must be controlled: (a) activities must not overlap, (b) duties and responsibilities must be clear-cut and similar in nature, and (c) every duty and responsibility must be assigned to some individual in the organization.

(2) In the personnel placement phase, one should consider the individual's mental and physical qualifications, aptitudes, and desires, and then determine if they are homogeneous (alike or related) to the job requirements. Quicker and better results can be obtained from people when they are selected for jobs in which they can use their basic knowledge and skills. Homogeneity of assignment in this phase can be accomplished by thoroughly and carefully analyzing an individual's mental and physical qualifications and aptitudes, and comparing them with what the job requires. Improper classification and assignment result in low morale and poor efficiency.

(3) While the results of effective application of the principle of homogeneous assignment usually cannot be measured in the yardstick sense, it is safe to say that increased efficiency and economy will result. If it is diligently applied at all levels, together with other principles of organization, homogeneous assignment will materially aid in the creation of a good organization. A conscious application of both phases of this principle will insure that resources are used in the most economical manner and that the quality and quantity of production are increased.

d. Delegation of authority. The word "authority" is defined as the right of decision or command. To delegate is to entrust to the management of another. Delegation of authority, then, is granting or giving an individual the legal right to make decisions and take action. Notice that this definition does not include giving the responsibility that is always present with authority. The commander or manager can delegate his authority, but not his responsibility for acting or failing to act. In actual operation the manager creates new responsibilities for his subordinates, the sum total of which will accomplish his own responsibilities.

(1) Stated as a principle, delegation of authority is granting authority to individuals in keeping with their responsibilities; that is, when a man is made responsible for a job, he is given the "power" he needs to do the job. There are three general types of authority. The first is authority due to force of character or personality such as that exerted by the leader of an informal organization. The second is that due to a special knowledge in a particular field, such as science or law; and the third is the authority which is inherent in position. It is the third type of authority with which we are concerned.

(2) Position actually means a specific job or task within an organizational structure. You are given certain legal rights to act when you are assigned your position as manager, and because you occupy that position you have an obligation to discharge to the best of your ability the responsibilities inherent in your tasks. You cannot escape this responsibility by passing it on to subordinates,

but by delegating authority you can make your subordinates responsible for accomplishing part of the task. You assign authority, but you still retain it. That accountability which you have to your superiors remains the same, no matter how much authority you delegate to others.

(3) Why does the need for delegation of authority arise? A manager should perform only those tasks which his subordinates cannot accomplish. For instance, the manager of a department which is divided into several sections must appoint an individual to be in charge of each section. These subordinate supervisors report directly to him, but each is responsible for his own section and must be given the authority to make decisions affecting his work and his personnel. The manager who is swamped with details probably is not delegating enough authority to his subordinate supervisors.

(4) In the process of delegating authority, and when considering its effect on the accomplishment of the organizational objective, you must realize there are three possible results: overdelegation, underdelegation, and proper delegation.

(a) If you overdelegate, you lessen your control over the subordinate, along with your control over operations. Decision making is placed at an improper level, and the entire organization suffers loss of efficiency and perhaps morale.

(b) When you underdelegate, the subordinate is not given freedom to act. For each decision he must get your approval; consequently, he soon loses all initiative and feels that his judgment is not trusted. You, yourself, are tied to a mass of detail and kept from more important work. When you underdelegate, you are implying that you can "run the whole show." When you become sick or leave the organization, operations may be impaired because there is no one present who feels he has the ability or the authority to make decisions.

(c) Between these two extremes there is the point of the proper amount of delegation. To arrive at this point, you must know your objective and your job; know your personnel, their capabilities and limitations; know your resources; evaluate all circumstances; and then proceed to assign tasks, reserving to yourself the major decisions.

(5) The good manager uses judgment and commonsense in analyzing the situation. He is not chained to his desk, but has freedom of action to know what is going on in his organization. When there is a difficult problem or decision, he has sufficient time to study the matter carefully and to come up with the right answer. The net effect is that the organization can operate efficiently, even in his absence; subordinates exercise initiative; and the organization is molded into a team, all working together.

4. STEPS IN ORGANIZING. The need for organizing can be traced back to primitive society; men have organized into collective groups for a common purpose since the dawn of civilization. It is reasonable to suppose that, at about the same time, man learned that organizing on the spot and at the time of necessity was often too late; survival required prior planning and assignment of tasks. From the need for survival, through joint and collective action, evolved the process of organizing. Then, as now the chief was guided in setting up an organization by following three principal steps: determining the jobs, establishing the structure, and allocating the resources.

a. Determining the jobs. In this initial step, the primary considerations are the organizational objective and the resources available to you. Your immediate task is to divide the overall objective into specific jobs. This involves the planning procedures of gathering facts and assumptions, evaluating them, and deriving essential factors. Specifically, you use the tools of forecasting and policy.

(1) In order to clarify, let us create a situation. You have been appointed manager of a post recreation office, and your organizational objective is to provide recreation facilities for personnel assigned to the post. There are policies and directives from higher management authority, and you know the number of personnel and the facilities available. To determine the jobs, you need to know what services your office will provide. For instance, if you are located in Needles, California, providing and manning facilities for skiing would hardly be a job of your office, even though skiing is a form of recreation.

(2) The amount of detail required in the subdivision of the objective depends on the working level: the closer it is to the operating level, the more detailed is the breakdown. As a final check, when the list of jobs is completed, the total of the job efforts should enable the accomplishment of the assigned objective. To prevent overlaps or gaps between specific jobs, clear-cut delineation should be made when subdividing the objective. To return to the situation above, delineation might be by sports, entertainment, and crafts and hobbies; sports might be further broken down into individual, team, group, and mass participation.

b. Establishing the structure. The second step, establishing the structure, is more detailed than determining the jobs, but is dependent on completion of the first step. You should analyze the list of jobs and determine the specific duties and responsibilities of the individuals who will hold those jobs. At the same time the jobs should be grouped into units and subunits according to the types of duties (homogeneous assignment). Working relationships must be established between each unit and each individual position in the organization in order that each person will know how to perform his job in accordance with the assigned task of his particular unit and so that all units will be working toward a common goal. The result will be a pattern of relationships based on specific jobs to be performed by individuals, with the continuing purpose of integrating their efforts for the accomplishment of the overall objective.

(1) In the step of establishing the structure, you should consider that there are various methods of organizing. Some of these methods are by line or manager authority; by activities; by individuals; or, though not recommended, by alphabet. It is risky to organize around an individual, particularly in the military. Although it is good management to make full use of the abilities of each individual (homogeneous assignment of personnel), the organizational pattern itself should not be designed to fit the abilities of a particular person. Obviously, building an organization around an individual is a dangerous procedure, since that person may be transferred or may move to another duty on very short notice. The approach in this area is to determine the ultimate organization and accept the additional benefits that a future exceptional incumbent may provide.

(2) When the organizational structure has been determined, it should be charted. The organizational chart should include a written description of duties and responsibilities for each position. It should provide answers to questions of span of control, homogeneous groupings, unity of command, balance, definite supervisory

channels, specialization, simplicity, and many more. Study of the chart will provide a check of the effectiveness of your own organizing actions and may prevent future performance breakdowns.

c. Allocating resources.

(1) After the organizational structure has been determined, personnel must be selected. They must be assigned jobs and provided with the necessary equipment, the space in which to work, and the time in which to carry out their duties. Observing the principle of homogeneous assignment, every reasonable attempt must be made to place the best qualified individual in each job. Basic considerations which should influence selection include: Does the candidate have the skills required, or can they be developed in him? Will he fit into the job without adverse reactions on the part of his associates? Usually, a generalist is more effective than a specialist in a supervisory position. A specialist may overcontrol his known area. A specialist is, however, very useful in making recommendations on technical matters. He can frequently provide answers to such questions as: Is the cheapest satisfactory material being used? Are authorized or acceptable substitutes known, and can they be procured promptly if necessary? Can supply sources assure uninterrupted procurement? Is use of critical materials held to a minimum? Are alternative methods and procedures given full consideration?

(2) When the details of what is to be done are clearly recognized and the personnel have been tentatively placed, consideration must be given to equipment and facilities. The determination of the equipment and facilities best suited to a task requires a detailed analysis of the task itself. The following question will aid in this analysis: How quickly must the task be accomplished? What will be its total duration? Is its prime objective to improve training, to increase production or to speed up reporting, to improve quality, to reduce cost, to provide a service, or to improve working conditions?

(3) Selection of equipment requires technical knowledge if the task being considered is one involving machinery, instruments, and industrial-type processes. Although the manager usually has specialists to advise him in the selection of this type of equipment, there are several factors that he himself should be aware of. General-purpose equipment should be used whenever possible (plans may be changed or altered, thereby making special-purpose equipment useless). Automatic and semiautomatic devices or special training aids may amortize high initial cost quickly in manpower savings and improved products. Modern inspection devices can materially speed up many processes.

(4) Facilities best suited to the task are often difficult to obtain. When a choice is offered or a change is to be made, the following general points should be considered: before work is begun, allow all interested personnel to see and discuss the proposed layout and workflow (this may prevent problems such as backtracking, crossflow, or bottlenecks); and attempt to have a trial run or a pilot operation to avoid excessive expenditures on a new process.

5. CHARACTERISTICS OF A GOOD ORGANIZATION. Some of the more important characteristics which distinguish a good organization are as follows:

a. It is capable of accomplishing the objective. To be effective, an organization must provide for everything necessary to get the job done. If the final organization evolved is incapable of accomplishing the assigned task, it is of little value to anyone; men, materiel, space, and time will have been wasted.

b. It is stable. Effective organization anticipates changes, so that only significant changes in objectives or resources will create reasons for reorganization.

c. It is flexible. Flexibility is a corollary to stability in an organization. Organizing must provide the ability to cope with changing situations and conditions. An example in military organization is a combat engineer battalion, which is designed to provide engineer support but can be used as a combat reserve.

d. It is capable of growth. The activities and subactivities should be grouped to permit their departmentalization, when the growth factor dictates, without creating major reorganization. An everyday example of accounting for this growth factor can be found in a post engineer section. For this section, objectives remain fairly constant: maintenance of grounds, buildings, and facilities. The degree of maintenance is not constant, varying with the strength of the post and the engineer section; yet organization of the section need not change as the status of the post changes from standby to full strength.

e. It is simple. A reliable mark of good organization is the simplicity of the structure as shown on the organizational chart. If an activity is not necessary or justifiable, get rid of it. This may be done by eliminating it or combining it with another activity. An organization that has organizational elements which are neither necessary nor justifiable is not efficient.

f. It has balance. In an effective organization there is balance among the activities. The activities are in proper perspective to each other and to the objective; resources are proportionally divided; and authority is evenly delegated.

6. DEVELOPMENT OF TYPES OF ORGANIZATION. Some managers organize by what we may call intuition, and some use the trial-and-error system. In the former, the manager builds his organization around his own or his subordinates' ideas and abilities. This kind of management may result in an adequate organization, but it seldom results in a completely sound one. Organizations built upon personal abilities of the men in the organization usually last only as long as those men remain. In the trial-and-error method too, a successful organization may finally arise, but during the experimental period there is a tremendous waste of time, money, materiel, and manpower, a price that business, Government, or the military can ill afford.

In direct contrast to the intuitive and trial-and-error methods is the scientific approach to organization, employing principles of management and organization along with the use of established types of organization. Although there are innumerable modifications to each, basically there are three types of organization: the line, the line-staff, and the functional.

7. LINE (SCALAR) ORGANIZATION. The word "line" as used here means an element of an organization which is composed of doers; in industry the line consists of those managers and workers who are producing or creating a product. For example: in a coal mining company, it is the persons digging, processing, or transporting the coal; and the foremen, superintendents, and bosses actually directing the workers. In the Army the line is that portion charged with waging combat; and in a military organization it is that portion of the organization which is trained for and charged with accomplishing the objective. In business and in the military, the line has a position of primacy, and other elements support it. The line includes the manager of the organization.

a. A line organization (fig. 6) is one which is built on pure authority. Line and scalar, as used in types of organization, are synonymous; i.e., the grading of duties scaled according to degrees of authority and responsibilities. Therefore, in such an organization authority flows in a straight channel from the manager through subordinate managers to the workers. The authority of each manager is supreme in his area of responsibility; all subordinate supervisors are responsible to the manager, and all individuals within the various organization elements are responsible to their specific department heads.

b. This is the oldest and simplest type of organization and is sometimes called the military type, since it originated with the early warring tribes in the days of the Asiatic conqueror, Genghis Khan. Many authorities use the company organization in the military as a prime example of scalar organizing; but this is subject to argument, since in the modern army there is specialization in the company and an element of staff organization (the executive officer, first sergeant, and company headquarters).

c. Advantages of a line or scalar organization consist of clearly defined individual duties; swift, definite, and complete discipline and control; economy; excellent unity of command; and proper delegation of authority. However, there are also disadvantages. A line organization lacks flexibility and provisions for growth. Subordinate managers must perform duties of general managerial nature for which they may not be especially fitted. Each subordinate manager is responsible for accomplishing personnel work, training, and supply for his particular element; as these duties increase, the requirements for accomplishing them may grow beyond the mental and physical capacities of one person. Other disadvantages include dependence on exceptional personnel (individuals who are not only experienced administrators but also well trained in a particular field), poor use of specialized abilities (the nature of the organization minimizes the importance of the specialist), and too much reliance on the chief or subordinate manager with corresponding loss of continuity and flexibility. (Note: Refer to figure 6, and picture the state of a line organization if the working force were doubled under each manager. What impact would this have on the principles of span of control, homogeneous assignment, and delegation of authority?)

8. LINE-STAFF ORGANIZATION. As previously stated, a great disadvantage of scalar organization is the rigidity of

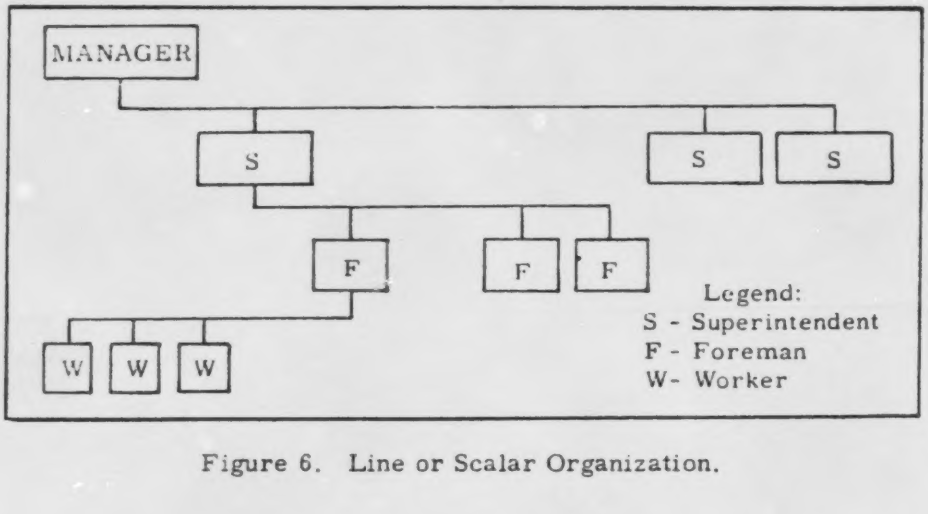


Figure 6. Line or Scalar Organization.

organization by pure authority, since the authority (manager) is often beset with activities beyond the capabilities of one man. No one person can know or do everything necessary to run an organization properly; he needs the assistance of others in the form of informative, advisory, and supervisory services. We describe persons who perform these services for the manager by the term "staff." The staff is the alter ego of the manager, an extension of the manager's personality (figs. 7 and 8).

The addition of a staff to the line organizational structure brings about the line-staff type of organization (figs. 9 and 10). However, the mere addition of a staff does not necessarily create line-staff organization, since the line element must continue to operate as before through the chain of managers. The staff must have an advisory but nonauthority status; i.e., directions, control, and instructions cannot pass directly from the staff to the worker or subordinate managers but must be given by the manager or in the name of the manager.

a. In the line-staff organization, lines of authority are present, and operational control is established. The sharp path of authority running from the manager to the subordinate managers of the operating elements and subordinate personnel beyond this point provides the control and discipline necessary in all organizations. The staff, which is outside the chain of managers and inserted between the manager and the operating elements, provides the operational control so necessary to efficient organization. The activities the staff assumes are usually the outgrowth of managerial activities that were originally located in the line. Accordingly, a staff duty or task can be added to a line activity at any echelon. The staff is not in the primary chain of authority. Members of the staff can give orders only to to their own staff sections; they have no managerial authority over the line or other staff sections. Their recommendations and directions are carried out through the pertinent line executive and within his authority. This type of organization has flexibility; the staff is able to absorb new activities or change old ones without undue disturbance of the line organization.

b. Disadvantages of the line-staff type of organization include the following:

(1) Staff advice to subordinate elements may be considered a managerial directive, and confusion may occur between line and staff personnel, especially in the areas of communications and authority.

(2) The staff may be ineffective due to lack of authority; i.e., if the manager does not properly delegate authority, he will not make full use of the abilities of his staff.

(3) Line executives may come to rely on their staffs to such an extent that they lose their managerial ability.

(4) Staff members may sometimes give careless or ill-advised opinions on the premise that they are not accountable for the success of the operation.

(5) Friction may develop between line and staff elements, due to the inability of each to understand the other's viewpoint.

(6) It is possible that the manager will rely more on the advice of the staff than on that of other line elements because the staff usually has more frequent access to the manager.

9. FUNCTIONAL (DIRECTORATE) ORGANIZATION. The third type of organization may be found in some business and industrial organizations. When charted,

STAFF

1 A staff agency is a useful element of the planning and coordinating responsibility.

2 Staff is an advisory element. It does not have operating responsibilities.

3 The responsibility of staff is , to study administrative problems, to observe, to plan, to advise, but not to act.

4 The service of advice provided by the staff operates upward, outward, downward, and across organizational lines.

5 The line and staff principle may be a principle of operation. It is an effective way in which the delegation, coordination, and division of responsibilities can be adapted to practical use. It is a device the manager uses to satisfactorily discharge his obligations.

6 The staff gathers information which the commander uses to prepare plans, make decisions, and transmit orders. It keeps the commander informed on matters requiring action, makes a continuous study of the situation, and plans for future contingencies. A staff officer should be an active, well-informed assistant to the commander and a helpful adviser to subordinate commanders.

7 The director, chief executive, general manager, or commander must plan and direct operations. He is not an operating official, except in small organizations. He assigns to others the actual performance of the work. He must delegate authority, keep informed of activities, coordinate the work of all related elements, adjust disagreements, and take corrective measures as required.

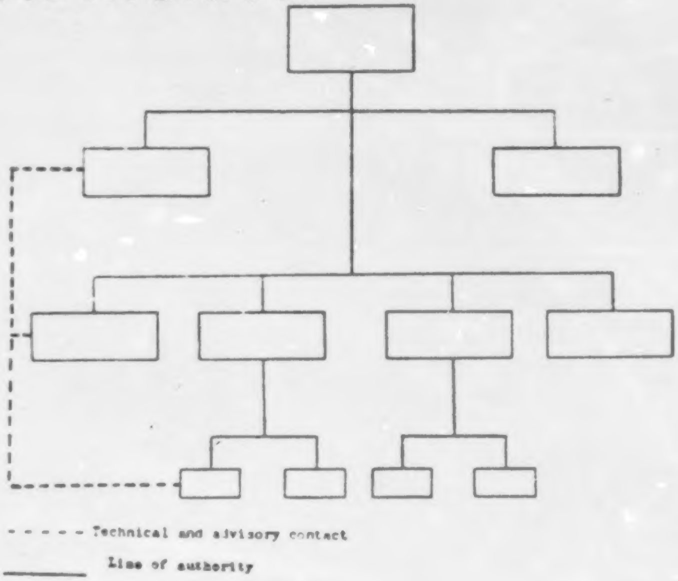
QUALITIES OF A STAFF OFFICIAL

It is more important for a staff official to have liaison ability than the ability to direct. He makes recommendations to the commander; but, if they are not accepted, he must have loyalty to the commander's decisions and opinions. The effective staff officer does not seek personal recognition. He guards against any leaning toward quick and inflexible decisions, and practices judicious persistence and patience in accomplishing desired results.

Figure 7. Staff and Staff Officials.

THE LINE OF AUTHORITY

The manager must have line authority to exercise effective supervision over subordinate elements of the organization. Generally, direct advisory, technical, and informational contacts are permitted, but in problems of management, policy, reprimand, and related subjects action through the channel of authority is required.



WHAT IS THE MEANING OF Authority?

A staff officer has no authority to command.

*Policy, decisions, and plans, whether originating with the commander or with the staff, must be authorized by the commander before being put into effect. When a staff officer by virtue of delegated authority issues an order in the name of the commander, responsibility remains with the commander even though he may not know of the order.

*The exception is that internally, the staff officer has command responsibility with respect to his subordinate personnel.

DUTIES of a STAFF NATURE

Give professional aid and assistance.
Act as agents in harmonizing plans, duties, and operations.
Prepare detailed instructions for the execution of plans.
Formulate procedures for effective liaison, investigation, measurement, planning, conference, study, coordination, the processing and flow of work, etc.

Figure 3. Authority.

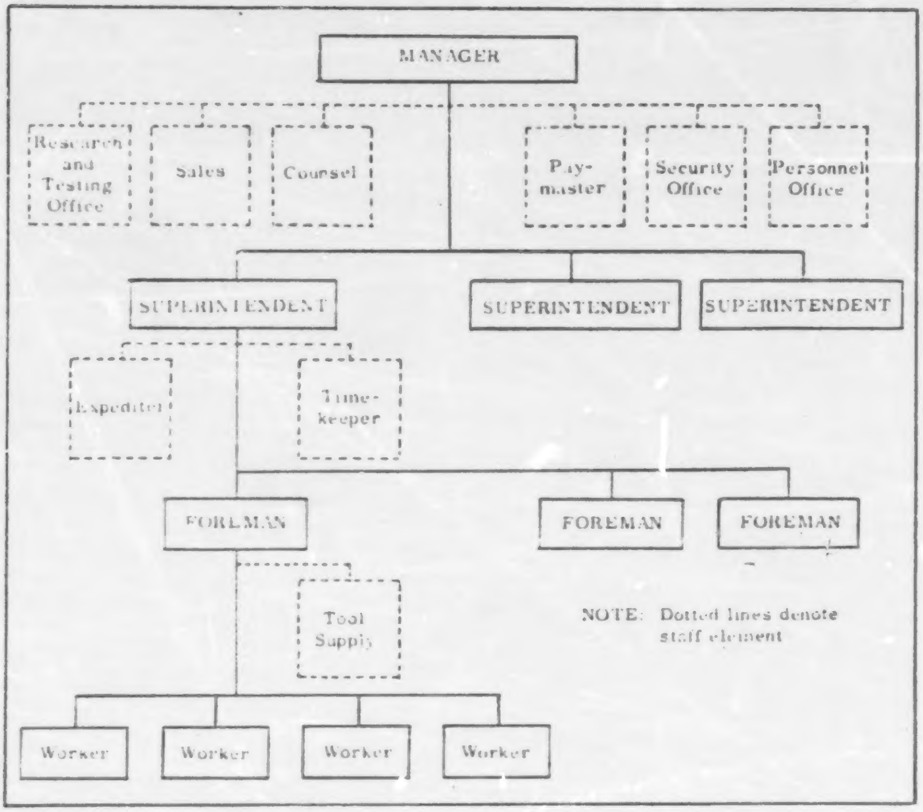

MANAGER
Research and Testing Office
Sales
Counsel
Pay-master
Security Office
Personnel Office
SUPERINTENDENT
SUPERINTENDENT
SUPERINTENDENT
Expediter
Time-keeper
FOREMAN
FOREMAN
FOREMAN
Tool Supply
NOTE: Dotted lines denote staff element
Worker
Worker
Worker
Worker

Figure 9. Example of a Line-Staff Organization in Industry.

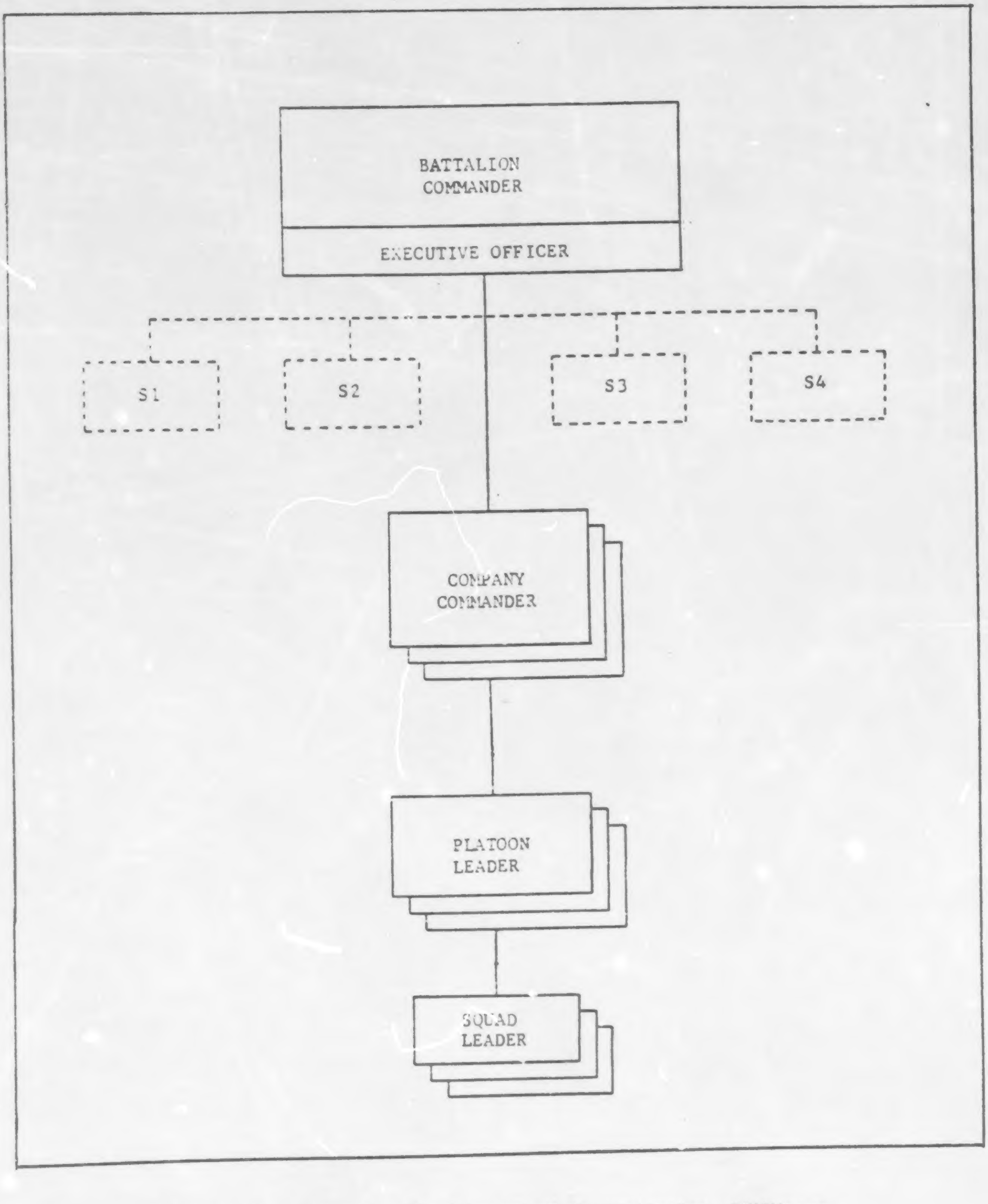

BATTALION COMMANDER
EXECUTIVE OFFICER
S1
S2
S3
S4
COMPANY COMMANDER
PLATOON LEADER
SQUAD LEADER

Figure 10. Example of a Line-Staff Organization, Military.

it looks the same as the line-staff. There are similarities between the functional and line-staff type. There is an overall manager; there are subordinate managers and operating elements; and in most cases, insofar as accomplishment of objectives is concerned, the authority line runs vertically. In addition, there are directors at various levels of the organization, and they perform advisory, informative, and supervisory services for the manager, but here the similarity ceases.

a. In the line-staff type of organization, authority is contained and represented in the manager, the staff has no managerial authority and cannot issue orders or directives in its own right. In the functional type of organization, delegated authority is given each staff section to control all aspects of its specific field throughout the entire organization. For example, let's describe a situation in which a small manufacturing company is organized on functional lines. Among the staff sections is an inspection office, and among the operating elements is a welding department. There is a plant manager, a foreman in the welding department, and a chief inspector. During the course of time, the sales office receives numerous complaints that the company's product is subject to breakdown. A sales office representative immediately asks that inspectors determine what is causing the trouble, and inspectors learn that an additional weld is needed. In this directorate type of organization, a representative from the inspection office can go directly to the welding foreman to request change in operating procedures in the welding shop to correct the error. Though the plant manager would undoubtedly be informed, the directive need not be issued in the name of the manager or through him. There are definite advantages in this type of organization, but, if carried to an extreme, they can become disadvantages. It makes maximum use of specialists in narrow and definitive areas, and applies the principle of division of labor in both a mental (staff) and physical (production elements) manner. It provides operational efficiency by assigning an expert to do nothing but administer and perform in his particular activity. It is extremely flexible and provides for growth.

b. Easily discernible disadvantages are the weaknesses of lack of unity of command, control, and fixing of responsibility; negation of span of control; overdelegation of authority; and difficulty of coordination among the staff sections.

10. ORGANIZING A STAFF ELEMENT. In the preceding paragraphs we have discussed types of organizations on the basis of the organization as a whole. We have not, however, discussed types of organizing within a segment of the whole organization; e.g., an intermediate manager's office or a staff section. Here too, organization may follow line, line-staff, or functional lines; but here there may also be single officer organizing.

a. To explain this further, let's look at an adjutant's office (fig. 11) in a military organization. The strength is 1 officer, 1 warrant officer, and 15 enlisted men.

b. The adjutant's office exists to advise the commander and the line elements and to provide services. The question then arises, "What type of organization is an adjutant's office?" When viewed by an infantry commander, it is a part of the staff element of the overall line-staff organization, when viewed as a section by the adjutant, it is a line type of organization, for, as shown in figure 11, every segment of the adjutant's office is engaged in accomplishing the objective given the office. Another question then arises, "Is the

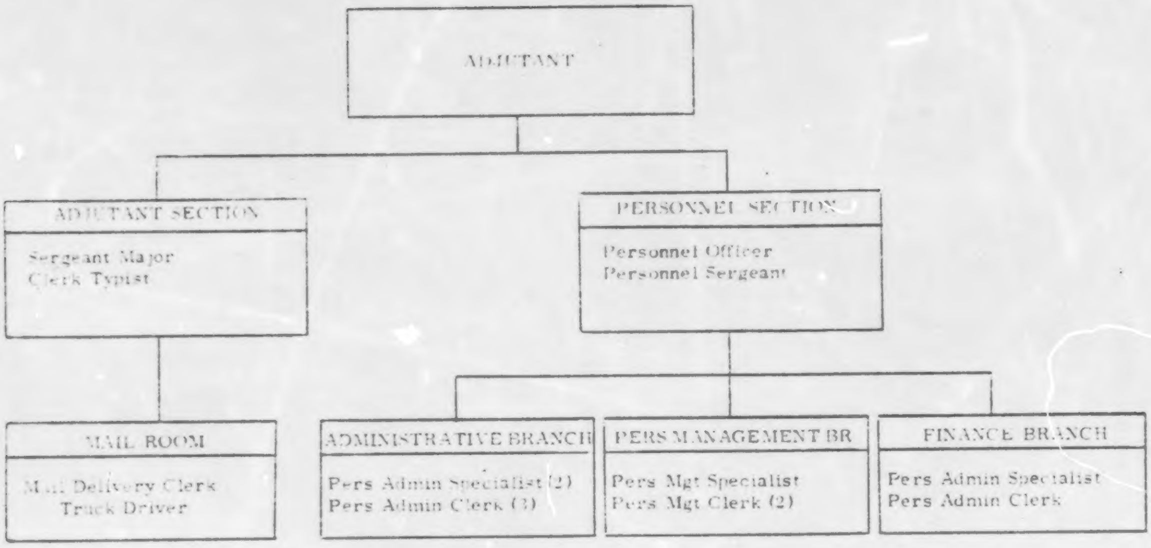

ADJUTANT
ADJUTANT SECTION
Sergeant Major
Clerk Typist
PERSONNEL SECTION
Personnel Officer
Personnel Sergeant
MAIL ROOM
Mail Delivery Clerk
Truck Driver
ADMINISTRATIVE BRANCH
Pers Admin Specialist (2)
Pers Admin Clerk (3)
PERS MANAGEMENT BR
Pers Mgt Specialist
Pers Mgt Clerk (2)
FINANCE BRANCH
Pers Admin Specialist
Pers Admin Clerk

Figure 11. Organization of an Adjutant's Office.

personnel section of the adjutant's office a line element only?" The answer is no, because the personnel officer is an adviser (in his field) to the adjutant as well as a subordinate manager. In a true analytical sense, an element of an organization may be line or staff or both, depending upon the basis of determination.

c. Next, let's take a look at the finance branch (fig. 11). Here, we see an example of a one-for-one relationship organization: one manager and one worker.

d. Finally, we can see possibilities for another provision in organizing; i.e., creation of an organization (either line or line-staff) wherein committees can be formed to provide a staff or possibly even a line task for the whole organization. In our example, the adjutant could appoint an enlisted promotion committee to recommend selected enlisted men of the organization for promotion. This committee would be outside the normal structure and, in effect, performing as a staff. In this same situation, the adjutant could appoint a committee to prepare new pay records for the organization, in which case the committee would be performing a line task for the adjutant.

e. All of this merely points out that organizing has no set pattern and that to cursorily examine a unit and then say, "That's line, that's staff," may not always be correct. Even at the lowest levels, there are few instances in which there is not some aspect of advice or services being performed by someone for the manager.

11. CONCLUSION. In order to operate effectively and accomplish the assigned objective, you must have a plan. But no matter how good that plan, it cannot bring about effective operations by itself. There

must be a place to work, persons to work there, individuals to help the workers, materials and equipment to work with; and all of these elements must be brought together in a manner that will achieve the objective. The bringing together is not the final phase; workers and helpers must be given studied and considered directions concerning what to produce, when to produce it, and how it should be made. All these matters fall under the next function of management, directing.

Annex A (PREPARING AN ORGANIZATION CHART) to Memorandum 46-4

1. Identify the chart fully showing the name of the unit, date of preparation, and title of person or name of department responsible for preparation. If the chart is for one division of a unit only, include such information as part of the title.

2. Use rectangular boxes to show either an organizational unit or a person. Plural executives and other committees occupy one box.

3. The vertical placement of the boxes shows relative positions in the organizational hierarchy; however, due to space limitations, line units are frequently shown one level below staff units.

4. Any given horizontal row of boxes should be of the same size and should include only those positions having the same organizational rank.

5. Vertical and horizontal solid lines are used to show the flow of line authority.

6. If necessary, use dotted or broken lines to show the flow of functional authority.

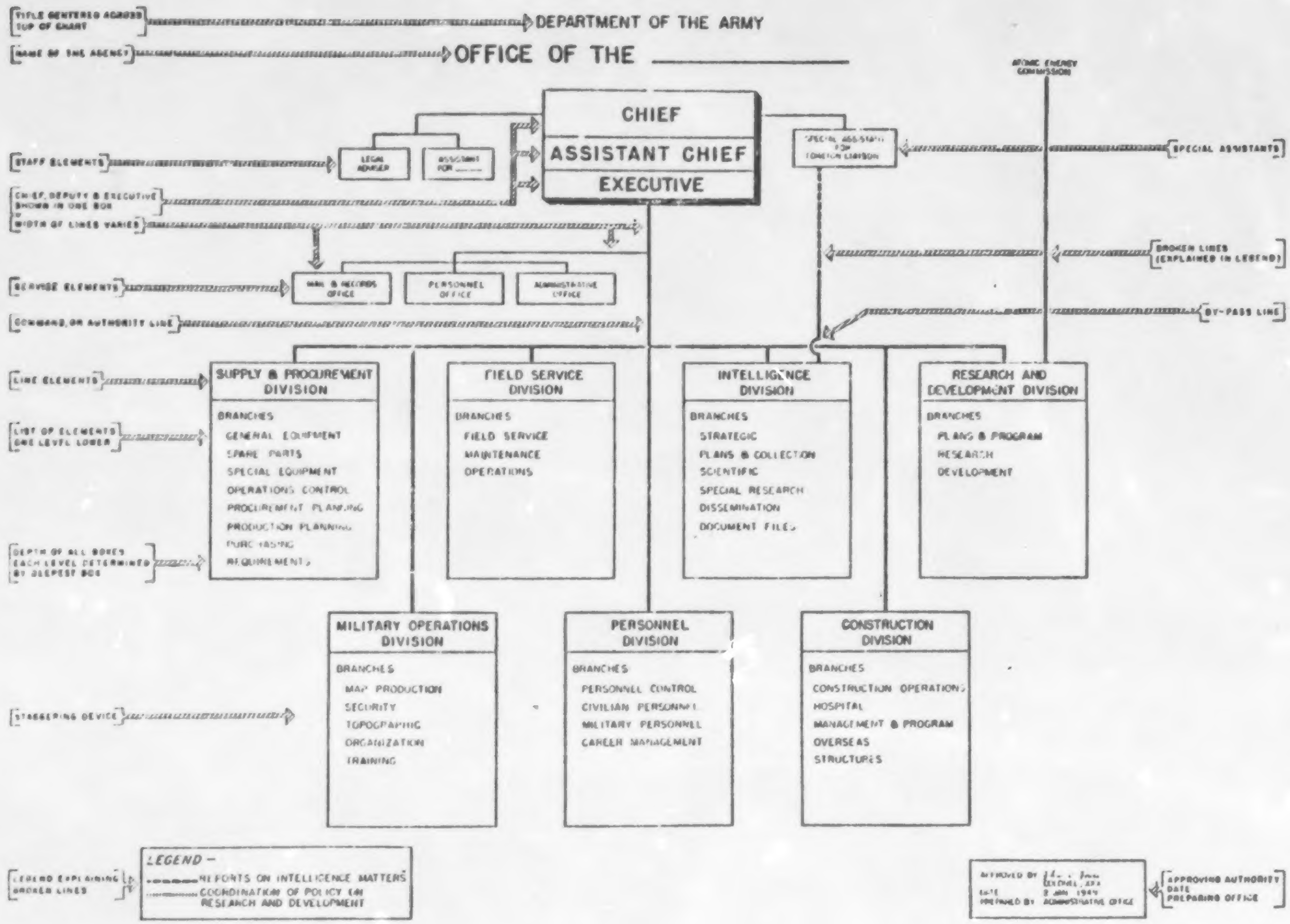
7. Lines of authority enter at the top center of a box and leave at the bottom center; they do not run through the box. Exception: the line of authority to a staff assistant or an "assistant-to" may enter the side of the box.

8. The title of each position should be placed in the box. The title should be descriptive and show function. For example, vice-president is not sufficient as it does not show function. The functional area; e.g., manufacturing, should be included even though it is not a part of the official title. Titles should be consistent; if necessary, revise titles so they are both consistent and descriptive.

9. Include the name of the person currently holding the position unless personnel turnover is so great that revision of the chart becomes burdensome.

10. Keep the chart as simple as possible; include a legend if necessary to explain any special notations. When preparing a separate chart for an organizational unit, include the superior to whom the unit reports.

Annex B (ORGANIZATION CHART) to Memorandum 46-4


TITLE CENTERED ACROSS TOP OF CHART
DEPARTMENT OF THE ARMY
NAME OF THE AGENCY
OFFICE OF THE ______
ATOMIC ENERGY COMMISSION
CHIEF
ASSISTANT CHIEF
EXECUTIVE
STAFF ELEMENTS
LEGAL ADVISER
ASSISTANT FOR ____
CHIEF, DEPUTY & EXECUTIVE SHOWN IN ONE BOX
WIDTH OF LINES VARIES
SPECIAL ASSISTANT FOR FOREIGN LIAISON
SPECIAL ASSISTANTS
SERVICE ELEMENTS
MAIL & RECORDS OFFICE
PERSONNEL OFFICE
ADMINISTRATIVE OFFICE
BROKEN LINES (EXPLAINED IN LEGEND)
COMMAND, OR AUTHORITY LINE
BY-PASS LINE
LINE ELEMENTS
LIST OF ELEMENTS ONE LEVEL LOWER
DEPTH OF ALL BOXES EACH LEVEL DETERMINED BY DEEPEST BOX
SUPPLY & PROCUREMENT DIVISION
BRANCHES
GENERAL EQUIPMENT
SPARE PARTS
SPECIAL EQUIPMENT
OPERATIONS CONTROL
PROCUREMENT PLANNING
PRODUCTION PLANNING
PURCHASING
REQUIREMENTS
FIELD SERVICE DIVISION
BRANCHES
FIELD SERVICE
MAINTENANCE
OPERATIONS
INTELLIGENCE DIVISION
BRANCHES
STRATEGIC
PLANS & COLLECTION
SCIENTIFIC
SPECIAL RESEARCH
DISSEMINATION
DOCUMENT FILES
RESEARCH AND DEVELOPMENT DIVISION
BRANCHES
PLANS & PROGRAM
RESEARCH
DEVELOPMENT
STAGGERING DEVICE
MILITARY OPERATIONS DIVISION
BRANCHES
MAP PRODUCTION
SECURITY
TOPOGRAPHIC
ORGANIZATION
TRAINING
PERSONNEL DIVISION
BRANCHES
PERSONNEL CONTROL
CIVILIAN PERSONNEL
MILITARY PERSONNEL
CAREER MANAGEMENT
CONSTRUCTION DIVISION
BRANCHES
CONSTRUCTION OPERATIONS
HOSPITAL
MANAGEMENT & PROGRAM
OVERSEAS
STRUCTURES
LEGEND EXPLAINING BROKEN LINES
LEGEND —
REPORTS ON INTELLIGENCE MATTERS
COORDINATION OF POLICY ON RESEARCH AND DEVELOPMENT
APPROVED BY
COLONEL
DATE
PREPARED BY ADMINISTRATIVE OFFICE
APPROVING AUTHORITY
DATE
PREPARING OFFICE

Annex C (TYPES, ESSENTIALS, AND PRINCIPLES OF ORGANIZATION)
to Memorandum 46-4

TYPES OF ORGANIZATION:

Line - authority is transmitted directly to subordinates.

Line-Staff - the line has command and operating responsibility; the staff advises on functions concerning the entire organization.

Functional - each specialist or specialist group is responsible for a function throughout the entire organization.

Directorate - a line or line staff pattern to which authority has been delegated from above.

ESSENTIALS OF ORGANIZATION:

Flexibility - the organization must permit either expansion or contraction without disruption.

Essentiality - every activity must contribute to the main objective.

Cohesive - the structure must facilitate adequate and timely communication and appropriate coordination.

Efficient - all resources to be used economically and to their fullest capacity.

Balanced - each activity must be effective in doing its part of the assigned mission.

PRINCIPLES OF ORGANIZATION:

Unity of Command - every member of the organization should report to one and only one superior.

Span of Control - should not exceed more than can be effectively coordinated and directed.

Delegation of Authority - authority should be delegated to the lowest level practicable.

Homogenous Assignment - the grouping of related tasks and functions to avoid friction.

Responsibility - specific, clear cut and understandable for all members of the organization.

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Clarity of Objective - objectives clearly understood by all segments of the organization.

Decentralization - sufficient to carry out responsibilities at each organizational level.

Communication - establish and maintain clear channels for all action.

Command and Staff Relationships - should both be within the scope of their responsibilities.

Consistency - consistent patterns of organization should be used at all levels.

Exception - managers should devote their time to "exceptional" situations and problems.

Scalar - every undertaking should have some type of superior-subordinate relationships.

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Annex D (CHECKLIST OF ORGANIZATIONAL EFFECTIVENESS) to
Memorandum 46-4

1. Overall Planning		Written Statements of Company Objectives	________
		Company Policies	________
		Sales	________
		Finance	________
		Production	________
		Personnel	________
		Other	________
2. Patterns of Leadership		Primarily	
		Authoritative	________
		Participative	
		Appropriate	________
3. Organization Structure	Departmentation	Function	________
		Product	________
		Customer	________
		Geography	________
		Process	________
		Sequence	________
	Span of Management	One over one	________
		Two or Three	________
		Three to Seven	________
		Eight or More	________
	Overall Impression	Proper Balance	________
		Proper Emphasis	________
4. Authority Relationships	Factors Limiting Effectiveness of Authority	Overlapping Authority	________
		Superior Authority	________
		Provisions for Subordinate Acceptance	________
	Line-and-Staff Relationships	Use of "Assistant-to"	________
		Limits of Line Authority	________
		Limits of Staff Authority	________
		Task Force Organization	________

5. Delegation		Parity of Authority and Responsibility	______
		Absoluteness of Accountability	______
		Unity of Command	______
		Personality Factors	______
6. Decentralization			
		Definition of Decentralized Unit	______
		Scope, Type, and Frequency of Decisions	______
		Availability of Controls	______
		Statement of Goals for Unit	______
		Degree of Decentralization	______
		Optimum	______
		Too Little	______
		Too Much	______
7. Use of Committees			
	Committees	Ad Hoc	______
		Advisory	______
		Management	______
		Composition	______
		Benefits	______
	Board of Directors	Outside Members	______
		Inside Members	______
		Contribution	______
8. Provisions for Control			
		Definition of Standards	______
		Units of Measurement	______
		Reporting of Exceptions	______
		Timeliness of Controls	______
		Strategic Placement of Controls	______
		Control Information for Line Managers	______

Annex E (OPTIONAL PRACTICAL EXERCISE) to Memorandum 46-4

From the members of your group select an ad hoc committee or, if this is not feasible, you develop the reorganization of your section or company. Construct organization charts for each type of organization.

Line

Line-staff

Functional

Directorate

Edition code-1
MEMORANDUM

46-5

THE FUNCTION OF DIRECTING

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Prepared by
United States Army Adjutant General School
Fort Benjamin Harrison
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Edition date: Aug 71

1. INTRODUCTION. Passengers on one of the transatlantic airlines are given a pamphlet called, "Your Safety Is Our First Consideration." In the pamphlet are explicit instructions on what to do in case the plane is forced to ditch. The last one reads, "Avoid getting unnecessarily wet."

It's usually easy to tell someone what to do, but it's not so easy to tell him how to do it. This business of giving instructions can be complicated. How can you be certain that the other person knows exactly what you mean? How can you be sure that when you tell someone what to do, you have told him everything he needs to know to get the job done? A lot of business problems can be traced back to faulty directions; you have probably been on both the giving and the receiving ends of them. An administrative officer has a continuing responsibility for the work of others, and his success is dependent on how well he is able to direct his subordinates.

The third of the five functions of management is that of directing. This function fills the "middle slot" in management--the functions of planning and organizing lay the groundwork for the accomplishment of the work; the directing function launches the implementation phase. Or, to put it another way, plans have been drawn up for the specific mission; the organization has been set and staffed; resources have been allocated; and the enterprise is now ready to operate--what is needed is an order or directive to start the action. The function of directing (or any of the other management functions) does not exist as a separate entity and does not have a special spot or position in the management cycle except as it is related to a specific plan at a specific time. Directing is a continuous part of management; it overlaps the other functions and has no "stop and go" signals.

2. MEANING OF DIRECTING. Directing is the process of getting individuals to perform their jobs well, willingly, and quickly. To expand on this, directing is the function of management which involves communicating decisions and ideas to subordinates through the issuance of oral and written instructions and exercising command and leadership to insure that the instructions are followed. Directing is more than just writing and issuing orders; it is also communicating them in such a manner that subordinates will be motivated to carry them out.

3. BASIS FOR DIRECTING. Directing gives life to the organization. It provides for the initiation of action and day-to-day supervision. It provides guidance that keeps production high in all operating elements. It maintains balance between requirements and accomplishments, and provides for the most economic use of resources.

a. After the work has been planned and the organization set up to accomplish the work, operations must begin. Look at it this way: at one end of an office is a great pile of manuscripts, papers, charts, and diagrams, representing work to be done; at the other end of the office are desks and workers. What good is either of these elements in its present form? Exactly none--because there is a step missing. The gap between the plans and the workers is unbridged, and this is where directing comes in. Orders and instructions must be issued, telling what is to be done, when it is to be done, and (in some cases) how it is to be done. In answer to the questions when and where directing should take place, the following rule applies in most cases: in every endeavor in which there is work to be performed, directing, in varying degrees, must be present. It is a continuing process and should be exercised at the vantage point from which the most effective results

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may be expected. (This vantage point may be within the area of activity, or it may be in an office or a building apart from it.)

b. To exercise the directing function, you must be in a position where you can direct and have the authority necessary to gain the cooperation of your subordinates. This authority usually is inherent in your position. The function of directing is somewhat the same as commanding, although the terms are not interchangeable. In effect, when you exercise the directing function, you command your subordinates to carry out your directives. However, directing is more than this; it involves understanding people and applying the principle of human relations in specific as well as general situations.

c. The terms "directing" (or "direction") and "leadership" are similar in meaning. In its more formal sense, leadership encompasses the issuance of orders and directives and also includes all actions necessary to secure the most effective implementation of the directives and orders. Inherent in leadership are such functions as motivating subordinates, giving them advice and assistance, giving recognition of achievement, and taking corrective action when necessary. Directing (leadership) knows no set levels. It is as applicable in a small office as at the Department of the Army Headquarters. The scope changes with the level, but fundamentals are the same. In general, it is necessary to determine how much directing is required, to select methods of communication that will tell people what to do, to motivate them to want to do it, and to supervise the way it is done.

4. EXTENT OF DIRECTION NECESSARY. The degree of directing required is dependent on various factors. Some operations may require close direction, virtually a step-by-step delineation of each duty. In these cases a directive may be needed for each succeeding phase of the operation. In other operations there need be only an initial directive to "get the ball rolling," and thereafter the phases of the operation fall into place smoothly and mechanically. Usually, the extent of directing necessary comes somewhere between these two extremes. There is no ironclad set of rules to use, but the following factors must be considered.

a. Type of operation. A stable or continuing type of operation requires less direction than a changing operation. For instance, an industrial-type operation that turns out the same product repetitively is quite different from a training activity which has varied and frequently changing requirements.

b. Degree of organization. Generally, a greater directing effort is required in the more complex type of organization. It can be expected that more effort in direction will be required for an organization of several geographically dispersed units than for one in a single location. Also, directing usually is less complicated in an organization in which the executives practice delegation of authority.

c. Level of experience. Whether considering the entire enterprise or only a portion of it, the requirement for directive effort decreases as the members of the organization develop operating experience. Many matters which initially require considerable problem solving and much directive effort soon become commonplace, and standing operating procedures (SOP's) can replace or supplement personal supervision.

d. Competence of executives. One of the primary reasons for seeking managers and supervisors of demonstrated

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competence is to reduce the directive effort required at each level of operation. This factor is closely allied to delegation of authority, since there is a greater willingness to delegate if competent supervisors are present. The authority to take action should be placed at the lowest possible organizational level capable of taking proper action. This gives the higher managerial levels more time to spend on major policy direction.

e. Management policies. Command and management in the Army are particularly responsive to the "will of the leader." If the manager personally involves himself in the direction of minor matters which could be taken care of equally well by his subordinates, the result often will be that supervisors throughout the organization will follow the same general pattern. This results in the organization's adopting a policy of overdirecting at each organizational level.

5. COMMUNICATING THE DIRECTION. No matter how sound your decisions are or how important your orders may be, they are worthless unless they are known to and understood by (communicated to) the people who are to carry them out. A very general explanation of communication is as follows: "The way in which one person passes information and understanding to another person." To apply this to management, we must expand the explanation: "Communication is an interchange of facts, viewpoints, and ideas which brings about unity of interest, unity of purpose, and unity of effort in a group of individuals organized for a common purpose." Communication is a process of creating mutual understanding among individuals.

Communication has a twofold purpose: to provide the information and understanding necessary for efficient job performance, and to promote the mutual understanding and loyalty necessary for willing cooperation and job satisfaction.

Communication involves a sender and a receiver. It always involves at least two people; one person alone cannot communicate. He may send out words, but unless they are heard and understood by another, communication has not taken place. For instance, if you give your orders in a foreign language, your troops may hear you, but they are not likely to understand you. Understanding is a personal process that can take place only in the receiver's mind. One of your most difficult (and most important) jobs is determining when you are being heard only, and when you are actually being understood.

6. ORAL COMMUNICATIONS. Of the two general types of communications, oral and written, oral communication is by far the simpler. There are many cases in which an oral order saves time, reduces paperwork, and eliminates confusion and misunderstanding. It can be used effectively when the action to be performed is relatively routine and simple; when it is accompanied by a demonstration; when the action is to be performed only once, or temporarily; in an emergency, when there isn't time to prepare and disseminate a written directive or order; when only a few people are affected; when it is to be carried out then and there; to give assistance and guidance; and to clarify a written order.

a. When face-to-face communication is feasible, it is preferable to using the telephone. In either case, however, it is usually wise to have the receiver repeat the instructions to be sure he fully understands them. In many cases, it is also advisable to make a written record of the conversation. A properly written memorandum or note not only makes the communication a matter of record for both the originator and the receiver, but gives a greater assurance of accuracy in carrying out the instructions.

b. In giving an oral order, it is essential to make sure you have the undivided attention of the person or persons who will carry out the order. Give the order clearly and distinctly, using words that cannot be misunderstood. Sometimes it may be necessary to demonstrate what you want done. At the time you give the order, point out any difficulties or problems that may arise in carrying it out. If you have any doubt that an individual thoroughly understands what is expected of him, ask him to repeat the main points.

c. It is as important for a manager or supervisor to know how to receive and carry out oral orders as it is to know how to give them. The first step, of course, is to listen. Simple as this sounds, the majority of people have never learned how to listen. Something outside the window distracts their attention, a word or phrase sidetracks their thoughts, or a gesture or mannerism causes annoyance and subconscious rejection of what is being said. Also, listening involves more than just hearing words. It requires knowing just what the speaker means by the words he is using. If he says, "I want the report right away," does he mean this afternoon? Tomorrow? Next week? If you're not sure, ask him! Listening also means watching and interpreting facial expressions and physical movements. Listening is an active mental process, not a passive one. Don't "sit back and listen"--"sit up and listen."

d. Oral instructions are not always given in the sequence in which they must be carried out. When you are the recipient you will often need to sort the information you have been given in terms of Who? What? When? Where? and How? If, after listening carefully to the directions and then answering the above questions, you still do not understand all of the points, you should ask for clarification.

e. If you ask an individual why an order was not properly carried out, he will probably give you one of two answers, according to whether he gave the order or he received it. If he received the order: "The boss didn't explain what he wanted me to do." If he gave the order: "The numbskull didn't listen to what I told him to do."

Oral orders may be misunderstood for a number of reasons--most of which can be avoided if the person giving the order can answer "Yes" to the following questions:

(1) Did I speak clearly and distinctly? Mispronunciation and poor enunciation are often the cause of misunderstanding. For instance, be careful of sound-alike words such as fifteen and fifty, or sixteen and sixty. They are easy for the listener to confuse--yet a misunderstanding can have disastrous results.

(2) Am I sure the words I used are familiar to the persons to whom I was talking? Do they have the same meaning for those persons that they have for me? Even common words have different meanings for different people. This, of course, applies to written as well as oral communications. Take the case of the politician who, during his campaign for election to his State House of Representatives, distributed handbills promising "I will work for you." After his election, a farmer told him that he voted for him and now needed some help putting up

alfalfa. Commented the politician. "I did it. But from now on I'm going to watch what I say!"

(3) Did I give all of the information necessary to answer the questions as to who, what, when, where, why, and how? A lieutenant said to his secretary, "Get this report typed up as soon as possible." He meant, "Drop everything else and do it now." She thought he meant, "Do it as soon as you finish the other work you have on hand." Result? The report wasn't ready in time for the staff meeting, the lieutenant was "chewed out" by his boss, and you can imagine what the lieutenant said to his secretary.

(4) Am I sure that the person(s) concerned fully understood my instructions? A sergeant, giving directions to an ambulance driver, said, ". . . then you will come to a fork in the road. Turn to the left and go about 7 miles to a large green and white farm house. Now, be sure you make the right turn! Is that clear?" The words were simple and he spoke them clearly and distinctly. Later, he swore he'd told the driver to turn left at the fork in the road, and the driver was equally positive he'd been told to turn right. The mistake could have been avoided if the sergeant had asked the driver to repeat the instructions.

(5) Did I give the order at a time and place where there was a minimum of noise and confusion?

(6) Am I sure that I had the full attention of the person to whom I was talking? If you could not answer "yes" to the preceding question, it is unlikely that you can say "yes" to this one. However there are things other than noise and confusion that cause inattention. There are external distractions such as a pretty girl walking by or snatches of conversation at a nearby desk. There are also internal distractions, and these are harder (if not impossible) to detect. Although he may have an attentive attitude, the listener is often "tuned out" while his thoughts are occupied with last night's bowling score, family problems, dislike of the person talking, personal discomfort (such as indigestion or headache), or just plain disinterest and boredom. The safest way to counteract these things is to have the individual repeat the instructions you have given him.

7. WRITTEN COMMUNICATIONS. A written communication has certain advantages over the oral type. It is usually more accurate and precise, and the person receiving it has time to analyze and study its content. Also, it is easier to remember something you have read. Written directives, too, have more force of authority. On the debit side, written communications require considerable time and effort to prepare; detailed written directives often result in inflexibility; and the quantity of written material a person actually will read and understand is limited. In general, written communications should be used to transmit orders to a location outside your own organization; when precise figures or complicated details are involved; when execution of the directive extends over a considerable period of time; when the matter is of such importance that special steps are needed to avoid misunderstanding, and when the sequence of steps in which the order is to be carried out is important or needs to be followed exactly. General categories of written communications used in the function of directing include orders, directives, SOP's, policies, and organizational memorandums, circulars, and bulletins.

a. Orders. An order is a directive, from a superior to a subordinate, which prescribes a specific course of action; or put more simply, an order tells a subordinate what to do. An order may be in the form of a handwritten, informal note or a mimeographed bulletin or memorandum, or, at the other extreme, it may be a formal military communication, complete with carbons, inclosures, and other addenda. An order is the traditional way of initiating action in a military situation.

b. Standing operating procedures. Establishing an SOP is an excellent method of directing routine, day-to-day activities. Used properly, it will result in standard procedures which will produce satisfactory results in individual or group work. When objectives change or the scope of the activity expands or contracts, an SOP will help in determining the nature and extent of the operational changes that should be made. In simplest terms, an SOP is a set of prescribed procedures and duties pertaining to specific operations within a particular organization. In an administrative office, no one item can add more to the continuity of operations than can an SOP, since most actions are routine or repetitive.

c. Policy. A policy is a broad directive that guides an organization toward the achievement of an objective. Policy may be considered as decisions made by a manager to set organizational guidelines for future actions, or it may be the authority which sets up actions on a routine basis. Although policy is expressed in written communications, it is not necessarily restricted to writing. Policy often evidences itself in actions and words as well as in written directives.

8. COMMUNICATION WITHOUT WORDS. Communications are not limited to speech and writing. These two means are undoubtedly the most important, but consideration should also be given to the less well recognized ones. Ideas and information may be transmitted through such media as behavior and mannerisms, gestures, actions, reactions, and various audio effects such as tone of voice, inflection, music, and other sounds. (For instance, a soldier in a foreign country can communicate certain ideas and desires to a person who does not understand his language.)

The manager who thinks that means of communication are limited to talking to people, writing letters, orders, directives, and memorandums, and receiving oral and written reports from his subordinates is overlooking much that can be helpful to him. Whether he realizes it or not, a manager is communicating daily (voluntarily or involuntarily) with his subordinates through nonverbal communications.

a. Involuntary communication is often a by-product of voluntary communication. For instance, a supervisor who barks, growls, or shouts his orders may be obeyed--but he also (usually without realizing it) gives his subordinates the idea that he is inconsiderate, a bully, or a grouch. A supervisor who is genuinely interested in the welfare of his personnel may give them quite the opposite impression if he has an austere, unapproachable attitude, speaks to them only to give orders or to criticize, or wears a habitual frown. On the other hand, a supervisor may criticize or reprimand, or issue an unpopular order, in a voice and with an attitude that subordinates will accept and respect.

b. The danger of involuntary communication is that the communicator rarely realizes (or at least not for a while) the impression he is creating. The manager who is aware of this danger can make his job easier, promote a spirit of cooperation among his personnel, and improve his relations with his superiors--if his awareness causes him to be careful of his pattern of behavior.

9. THREE-WAY COMMUNICATION. The three-way principle of communication (sometimes called the three-dimensional principle of communication) is a term used to designate communication which flows from the superior downward, from the subordinate upward, and among individuals, organizations, or organizational segments on the same level (lateral or crosswise communication).

a. Communication downward. The superior communicates with his subordinates by word of mouth (face to face or telephone), by various written materials, through the use of pictorial devices such as maps and charts, or through some action taken. Communications flow downward for a number of purposes, most obvious of which is the communication of the superior's desires and requirements for action. Downward communications also disseminate information to the workers, inform them of changes in procedures or organization, allay their fears or suspicions springing from unfounded rumors, and, in general, keep the work force well informed concerning all aspects of the operation.

b. Communication upward. Communication upward is the transmittal of information and ideas from the subordinates up to the superior. This type of communication gives the manager an opportunity to evaluate his communication downward; it creates receptiveness for communication downward; it creates a feeling of "belonging" by inviting worker participation; and it demonstrates the manager's recognition of the personal worth of each individual. The successful manager encourages communication upward in order to avoid the possibility of grievances remaining unaired, to keep himself informed of conditions affecting morale, to insure that reaction to communication downward is not siphoned off, and to keep "gripes" from becoming issues. Communications upward are of particular value in obtaining suggestions that will lead to more efficient operations, information upon which to base a definitive interpretation of problems, and an explanation and interpretation of conditions that exist at all levels.

c. Lateral (crosswise) communication. Lateral communication involves transmitting information, ideas, decisions, etc., from one organization to another on a similar level. Communication across is closely involved with the function of coordinating (and its attendant principle of cooperation). In fact, coordination is impossible without the free flow of facts, ideas, and viewpoints across organizational lines--thus the importance of lateral communication.

Lateral communication also is that which occurs within a group or an organizational element. Commonly called the grapevine, it is the information which circulates among members of an informal organization. It may be based on speculation, surmise, or wishful thinking. It may result from communication, or lack of communication, downward. It may be rumors and gossip that undermine morale and create dissension. Whatever its source or its content, an alert manager will find it a reliable index of attitudes and morale among his personnel. It will tell him whether downward communication is achieving its purpose; whether personnel are being kept informed of matters affecting them and their work; and how he can improve his own standing with his subordinates.

10. BARRIERS TO GOOD COMMUNICATION. Blocks to communication downward are few, making this the easiest direction to travel. The manager can express his desires through orders, directives, and other written or oral instructions, while the subordinate has no such opportunities. Although a complete list of barriers to good communication would, when considered along with their cures, take up volumes, certain important ones are the following:

a. The tradition barrier. Tradition, authority, and prestige are on the side of the superior rather than the subordinate. The superior's reactions carry more weight than the subordinate's arguments.

b. Administrative language barrier. The superior knows the administrative language of the subordinate (for he has more than likely been at the subordinate's level), though the reverse could hardly be true. This puts the subordinate at a disadvantage in trying to think and feel his way into the superior's attitude and viewpoint.

c. Superior-subordinate relationships. The formal relationship between a superior and a subordinate creates methods of communication downward that cannot be used for communication upward. For instance, a superior may call a conference, post a notice, issue a memorandum, or at any time enter the subordinate's office by telephone or in person.

d. Lack of listening time. A busy superior may have neither time nor patience to listen. His impatience is readily recognized by subordinates and discourages them from attempting to communicate ideas or suggestions.

11. GATEWAYS TO COMMUNICATION. For each barrier to good communication, there is a gateway. Many of the gateways have already been covered, by inference. Here are some additional pointers:

a. Develop "multilinguists." Even though each basic element of an organization has its special "language," it is essential that each element (and each organization) learn to speak the language of the others (and, in the case of organizations, that they learn the language of related organizations). Always observe the principles of simplicity, brevity, clarity, and completeness in both written and oral communications.

b. Use the conference technique. A guided conference, where there is sufficient informality to draw out reticent individuals yet enough formality to keep the discussion on the subject, can do wonders for morale.

c. Include a remarks section in organizational reports; establish a suggestion box. The addition of remarks sections to some of the reports and the assurance that prompt consideration will be given to suggestions will allow you to be the first to hear of any circumstances that need your attention. Recognition of worthwhile suggestions encourages personnel to be alert for ways to improve methods and procedures, save time and money, and contribute to the overall effectiveness of the organization.

d. Avoid "walls of silence." If you won't allow anyone else to express an opinion, you build a wall of silence that deafens you to everything except the sound of your own voice.

12. MOTIVATION. A good director knows how to motivate his personnel. This step in directing is a challenge to your ingenuity. To motivate your personnel, to make them want to do the job, you must exercise all the attributes of good leadership and good management.

As a general rule the motivation step will take place after you have determined the extent of directing necessary and have determined how to tell your personnel what is expected of them. Then, before or concurrent with dissemination of this information, you should create in your personnel a desire to do the job. In this facet of management, the most important thing to remember is the principle of human relations. You are dealing with people, the people who are going to do the work, and your success is dependent on how well they do their jobs. There are many ways you can motivate your personnel--they are limited only by your own imagination. Although there are no absolute rules to follow, there are guidelines that are generally recognized as excellent motivating devices.

a. Ask questions. Show your personnel that you are interested in what they are doing; familiarize yourself with their jobs as much as possible. By so doing, you not only increase your knowledge of the operation and keep abreast of all developments, but also provide the workers with an opportunity to "sound off," display their knowledge, and make their desires and opinions known.

b. Be brief. You are wasting your own time and losing prestige with your personnel when you talk too much. Don't ramble, and don't use "gobbledygook." Brevity in both speech and writing will lead to clarity and conciseness of thinking, and consequently, better performance.

c. Be a good listener. This ties in with the attribute of asking questions. Once you have asked a question, devote your time and attention to hearing the full explanation. Also, let it be known that you are available, as your work permits, to hear grievances, suggestions, plans, and ideas. Keep an open mind, and actually listen to what the workers have to say--their ideas are valuable.

d. Be direct. Don't leave your personnel in doubt about what you mean. When you have something to say, say it, and say it to the person to whom it applies. If it's criticism, get it over with quickly and forcefully. If it's praise, give it freely, honestly, and graciously. Criticize privately, praise publicly. Be direct in all transactions with your subordinates and with your superiors as well.

e. Be earnest. To be successful in any job, you should put your utmost effort into it. This may be difficult with a routine or tedious task, but it will pay, often by kindling your own interest and nearly always in worker response. If the workers see that the supervisor is conscientious, they will probably be the same. Be earnest, not only in performing your duties, but also in your relations with both subordinates and superiors.

f. Be friendly. This is a basic motivating step and applies to all facets of the operation. This step is really quite simple to perform. If you are pleasant, good humored, courteous, and tactful, there will be an increase in worker willingness and in actual production.

g. Look for good in people. Don't operate under the assumption that your workers are lazy and uncooperative; look for the good in them; try to understand their motives; be optimistic and even idealistic in your attitude toward them. You'll find that more often than not your high hopes will be justified.

h. Set a good example. Frequently, the character of the manager sets the tempo and character of the entire group. If he is sincere, diligent, and swift in the discharge of his duties, his workers will probably perform in similar manner. On the other hand, if he is lazy, disinterested, and slipshod, he shouldn't expect his personnel to be any better. You must have the esteem and respect of your personnel if you (and the operation which you manage) are to gain optimum efficiency; one of the best--and easiest--ways to secure this esteem and respect is by setting a good personal example.

i. Explain "why" regarding directives. If a person receiving a directive understands why it was issued, he is better able to adapt his actions to the overall purpose. Explaining "why," is a key motivation step which wise managers will adopt. It is also an Army policy.

j. Give praise where it is deserved. When your workers do a good job, don't hesitate to tell them so, preferably in the presence of others. Praise them in a manner commensurate with the action performed--don't overdo it. The receipt of praise will motivate them to better performance.

k. Welcome just criticism. No manager is beyond criticism; he should welcome constructive and just criticism of his actions or policies. After all, you are not trying to establish your infallibility; your objective is to get the work done in the best manner possible.

l. Base your actions on personal relationships. This might be considered as a condensation of the other motivation methods. The successful manager takes a personal interest in all phases of his subordinates' activities. He clarifies his personal relations with his subordinates so that both he and they know how things stand. When you have sound personal relations with your subordinates, you are better able to indoctrinate them, prescribe training for them, and use the full extent of their abilities to help you accomplish your mission. One of the best methods of gaining willing response to a directive is to discuss the situation with the persons responsible for its implementation. This brings them into the problem area and makes them realize the need for a solution. Further, it gives you an opportunity to learn if there are any strong feelings or biases. Consultative direction leads to the development of leadership traits and has an important role in any supervisory training program.

13. DIRECTIVES. Although a directive may be issued in a variety of forms, there are certain characteristics that all directives, oral and written, should have.

a. The directive should be clear. Clarity is the first essential of any directive. There should be no ambiguity; words should be chosen carefully--they must mean the same thing to the writer and to the reader; unfamiliar abbreviations and highly technical language should be avoided.

b. The directive should be explicit. The individual receiving the directive needs to know how much initiative he is allowed and the range of his authority and responsibility. There should be no doubt in his mind as to what is to be done and the quantity and quality of performance that will be considered satisfactory. Also, the time allowed for implementation of the directive should be indicated.

c. The directive should be concise. In prescribing tasks, prescribe only those details or methods of execution necessary to insure that the worker or unit performs that which is required. Conciseness is needed in directives at all times, and in emergency situations it is even more important. Be brief and to the point in all directives.

d. The directive should be capable of accomplishment. The man who receives a directive should have the necessary authority, experience, and ability to perform the required action satisfactorily. Before issuing the directive, determine that time, equipment, personnel, external conditions, and other aspects of the total situation will permit the recipient to comply if he uses a reasonable amount of effort and ability.

e. Once a directive has been issued, there must be a followup action. In supervising the execution of the directives, you must allow sufficient time for subordinates to plan and organize the job. However, there should be no lag in the operation, and you should take corrective action quickly if it becomes apparent that implementation is taking longer than necessary. In all phases of directing it is important to maintain only necessary supervision. Overdirecting restricts initiative, and underdirecting fails to get the job done. A good rule to follow is to maintain only that supervision necessary for the timely and efficient accomplishment of the work.

14. SUMMARY.

a. Directing is sometimes referred to as the key link in the management chain: it is the process that activates the organization into implementing plans.

b. Clear communications are essential to good directing. People cannot be expected to perform work properly unless they understand what is to be done, when it is to be done, and how they are to do it.

c. A good director must have all of the characteristics of a good leader. He should be able to make his personnel want to do their work well. Without proper directing, the best plans and the finest organizational structure will fall short of success.

d. The function of directing does not occupy a specific niche in the process of management--it is a continuing action, embodied in the day-to-day activities of the manager, and performed concurrently with the other management functions. For the purpose of clarity, we have examined the function of directing as coming after the planning and organizing functions and prior to the coordinating and controlling functions because "on paper" this is where it logically falls. However, it cannot exist alone, and it is present in all phases of management.

Annex (OPTIONAL PRACTICAL EXERCISE) to Memorandum 46-5.

List some of the problems involved in the function of directing in your organization. Develop solutions to these problems.

Edition code-I

MEMORANDUM

46-6

THE FUNCTIONS OF COORDINATING AND CONTROLLING

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1. INTRODUCTION. The following experience was related by Major James Burford, formerly assigned to the United States Army Adjutant General School. "One of my first assignments as a second lieutenant was as supply officer in a company that was commanded by a rather crusty captain. At the end of a particularly frustrating day, when everything had seemed to go wrong, he grabbed his hat and strode to the door. Pausing, he looked back at me and said witheringly, 'Why don't you get in your car and go for a drive? There ought to be something you can control!'

"I was pretty peeved. Sure, things that day hadn't gone according to plan, but that wasn't my fault. Jones had fouled up the supply records; we didn't get our supplies because the clerk hadn't sent in the monthly requisition on time; Smith had goofed off instead of checking turn-ins; someone left the arms room unlocked; etc., etc. I couldn't think of a single thing that I had done wrong. It's easy to see now that it wasn't what I'd done--it was what I hadn't done that caused the trouble. As officer in charge of a section, I'd failed to do several important things. I didn't check to see if my personnel were doing what they were supposed to be doing; I didn't make sure that each person understood exactly what he was supposed to do; and I didn't find out why mistakes were being made. As a manager, I just didn't manage."

Specifically, Major Burford had disregarded those two important functions of management: coordinating and controlling.

2. THE FUNCTION OF COORDINATING. Coordinating may be defined as integrating all efforts and details necessary to attain an objective or accomplish a mission. This integration is achieved chiefly through the manager's consultation with others--his subordinates, his superiors, and representatives of other organizations concerned with the particular operation--to secure their cooperation. For the purpose of this study, we consider coordinating as following the function of directing in the management cycle. However, coordinating is one of the broadest functions of management and takes place concurrently and in close association with all the other functions. Through coordination the efforts of all are directed toward a common purpose. We have called directing the key link in the management chain, the step that "gets the ball rolling" from the preparation phase into the implementation phase. Coordinating, then, might be called the connecting link throughout the chain of management--coordination binds all of the functions together and insures that the group is working harmoniously and effectively toward the accomplishment of the mission. Some coordination is necessary in all phases of management; it is so closely intertwined with the functions of planning, organizing, directing, and even controlling, that none of these functions can operate effectively unless coordination is an integral part of each.

a. Coordination is the responsibility of every Army manager. It is the thread which ties the whole organization together at every level of activity. It extends down to the individual operator who works side by side with other operators on an assembly line. It extends to the private soldier who must coordinate his actions as a squad member with others, if all are to achieve the common purpose of the squad.

b. Cooperating is an important element of coordinating; however, the terms are not synonymous. Cooperating means acting or operating together, while coordinating extends beyond this to incorporate the purposes behind such actions. Cooperation is a condition of individuals working together in harmony (group effort); coordinating is the conscious and orderly arrangement of individual and group efforts to provide unity of action in pursuit of a common purpose.

3. NEED FOR COORDINATING.

a. All of the elements of an organization may be operating efficiently within themselves, but is this sufficient for accomplishment of the mission? The answer, usually, is no. The actions of each of the elements should be interrelated: they should be integrated into the overall scheme. The manager, through exercise of the function of coordinating, must see that each element is contributing its desired and expected share to the operation. He should set up guidelines for coordination prior to the actual action; then he should see that results of the action fit into their prescribed niches. Usually, a part of each action is carried out by different individuals, at different times, and under different situations. This requires teamwork to insure that all actions are moving toward the common goal. The larger, more complex, and more decentralized an operation is, the greater is the need for coordination, and the more difficult and complex is the the nature of this coordination. Although coordination cannot be the job of one individual--indeed, it must be a part of each person's effort--the coordinating function, for best results, is centered in a key individual, the manager. It is his responsibility to see that operations within each element of the organization are dovetailed into a harmonious entity.

b. Coordinating must be a continuing process, and the logical time to begin is during the planning phase of management. Requirements for coordination should be written into each plan. Both the planning and the organizing phases should provide for coordinating to be a part of day-to-day operations. Proper directing, culminating in the issuance of clear-cut and effective orders, can aid considerably in the coordinating function. Proper timing of the execution of the order is another valuable aid to successful coordinating. Good communications, certainly, are essential to proper coordination (a common saying is "About 50 percent of the workers never get the word"--an indication of poor coordinating on the part of the manager). The coordinating function is, or should be, a part of day-to-day operations, something that the manager provides for and of which he is always aware.

c. In exercising the function of coordinating, the manager is usually applying simple principles of logic. Once all details essential to a task or mission are completed, they must be synthesized in a logical manner toward the accomplishment of the task or mission. The manager's experience, commonsense, and logic tell him to use all human and material resources at his disposal, in the most efficient arrangement possible, to achieve the objective.

4. METHODS OF COORDINATING.

Coordination is intended to give all members of the organization a knowledge and understanding of the organizational objective, how it is to be accomplished, and how each individual or unit fits into the total scheme of the operation. Every meahs should be used to further this effort. The goal of the various methods of coordination is, first of all, accomplishment of the mission. But a secondary goal--and actually one which is necessary for the first--is the achievement of harmonious group effort, individuals willingly and effectively working together toward a common objective. The following is not an all-inclusive list of methods of coordinating but contains some of the measures that, through usage, have proved effective.

a. The conference. The simplest and most commonly used method for achieving coordination is the conference. The conference, which can include as few as two persons, may be employed at all levels of command, in any superior-subordinate situation, and in lateral relationships. Its obvious limitations are time and distance. Some advantages of the conference method are that it permits open discussion of points requiring adjustment, makes it easier to resolve controversies, and provides direct personal relationships--both lateral and vertical. The conference may be informal, with the only record of proceedings in the minds of the participating individuals; or it may be formal, with written or taped summaries for the records of the organization.

b. Oral methods. Use of the telephone, the radio, and face-to-face communication are considered oral methods of coordinating. The ways in which these methods are employed are apparent; they are similar to those discussed in the directing phase. The only difference is that you are telephoning, radioing, or talking directly to individuals to achieve coordination rather than to give an order.

c. Written correspondence. When conferences are not possible or oral communication won't do the job, written correspondence may be used to achieve coordination. This correspondence may include memorandums, notices, followup directives, bulletins, newsletters, informal notes, or any other form of written communication. Although written means of coordinating are often necessary (and frequently should be used to reinforce oral communications), conferences or oral communications should be used whenever possible.

d. The organization itself. The structure of the organization itself should contribute to the effectiveness of coordinating. In forming the organization, consideration should be given to the lines of responsibility between the various elements with reference to their use as lines of coordination. For example, existence of functionally similar subsections in different departments will contribute toward better mutual understanding of operations.

e. The use of committees. The committee method is an excellent coordinating device. You may set up committees to perform certain tasks; the chairmen of these committees report on their actions; and you are able to coordinate, through the committee chairman, the actions of the separate committees into the overall mission. Also, you may appoint special committees to coordinate activities within the organization, thus freeing yourself from some of the administrative responsibility (although, of course, you retain overall responsibility).

f. Use of the liaison officer. Often the liaison officer functions as an aid to coordination between two separate organizational elements. A liaison officer is an officer from one organization who is placed on detached duty with another organization in order to provide coordination and to represent the commander or leader of his own organization. Usually, the liaison officer is used among organizations which are engaged in common operations or projects. In a military situation, the liaison officer is used to a large extent to aid in coordination of efforts and planning between military units of different nations involved in common actions against the enemy.

g. Standing operating procedures (SOP's). In developing an organizational structure, it is normal to group related functions together and to write SOP's which are followed in routine work. These operating procedures, as well as other instructions, must provide for automatic coordination between and among individuals and units where such action is required.

h. Voluntary coordination. The promotion of voluntary coordination through contacts made between executives helps each become aware of the total objectives of the organization. Each executive must see his operation in terms of its support of the total operation, and be prepared to adjust his performance and that of his unit as necessary to achieve integrated action toward a common goal. Coordination must become a voluntary matter which is considered part of the job. A fellow executive may find a weakness or a factor which should be strengthened. It is better for all concerned that the coordinating action reveals these weak points. Correcting the absence of coordination after the implementation of a plan can be costly in terms of money, time, and reputation.

5. OBSTACLES TO COORDINATING. Whenever a group of persons meet, there is bound to be some element of conflict or difference. Personality differences are a common cause of these conflicts. Although they present problems in all operations, they are particularly apparent in the coordinating process; it is here that it is necessary to secure the cooperation of the workers (cooperation among themselves as well as with you) if you are to coordinate their actions. One personality type which hinders coordination is the overcompetent individual who may consider the coordinating function unnecessary since he knows more about his job and the factors affecting it than those with whom he should coordinate. Another example of a conflicting personality is illustrated by the individual who fails to explain his ideas to his associates because he fears their critical analysis might reveal flaws. Yet, unreasonably, he resents it when his ideas are not used. Another example is shown by the procrastinator who delays taking any coordinating action until it is too late. However, you may turn the personality factor to your advantage if you apply sound management principles, particularly the principle of human relations, to the process of coordinating.

6. WHEN IS COORDINATION COMPLETE? After you have taken all possible steps to achieve coordination within your organization, how will you know when the coordinating function is complete? In general, coordination is complete only when there is full cooperation--among individuals in an organization and also among separate organizational elements. If the organization does not seem to be moving "on course" toward the accomplishment of the mission, the coordinating function is not being carried out to its fullest measure. Coordinating is complete only when all the separate phases of the operation are tied together in such a manner that the objective is reached in the shortest time and at the least

expense, and that the product meets the highest standards.

7. THE FUNCTION OF CONTROLLING. Controlling may be explained as the process of seeing that everything is done according to established plans, procedures, and policies. To be more specific, it is the exercising of authority on the part of the manager to insure compliance with these plans, procedures, and policies. In his controlling function the manager compares the actual versus the planned action, and takes corrective action when necessary. One management expert explains control in these words: "In an undertaking, control consists in verifying whether everything occurs in conformity with the plan adopted, the instructions issued, and principles established. Its object is to point out weaknesses and errors in order to rectify them and prevent recurrence. It operates on everything--things, people, actions."

a. The explanation of the control function points out that it is essentially the same no matter to what kind of activity it is applied. The underlying element of control is that it is a sort of feedback, like a thermostat. When the temperature gets too high, the thermostat corrects the situation. When it falls too low, the control device makes the opposite correction through feedback. Good managerial control should function in the same manner.

b. Often, the difference between a successful and an unsuccessful operation is a matter of delicate balance. The manager must keep his organization operating at the correct rate to meet the demands placed on it. If the balance swings too far one way, the missions will not be accomplished, and it will be costly and difficult to restore the operation to a satisfactory position. Conversely, if the balance swings too far the other way, an overpotential is generated, and resources are wasted. Controlling is dependent on the processes of planning, organizing, directing, and coordinating. The more efficiently these functions are performed, the easier it will be to control the operations. The interdependence of the functions of management is illustrated by the establishment of objectives and goals in the planning process. These same objectives and goals also serve as standards in the process of control.

c. A manager uses a major part of his efforts in the controlling functions. Included in these efforts are selecting the criteria by which performance will be judged, setting standards for these criteria, checking and reviewing reports on performance, and taking corrective action.

d. Each situation has individual factors that must be considered in determining what type and amount of control will be most effective. In general, however, determination should be based on the following:

(1) The complexity of the missions and tasks to be performed.

(2) The size and structural arrangement of the organization.

(3) The external controls and restrictions imposed.

(4) The amount of delegation of control and the degree of decentralization practiced.

(5) The characteristics and abilities of the manager and his supervisory personnel.

e. For a very small organization the method of control may be relatively simple and largely in terms of personal contact. The manager may be able to observe the efforts of the personnel, evaluate their effectiveness, and personally direct any necessary corrections. For a large or complex organization more systematic procedures are usually required, and both personal and delegated control may be exercised in terms of records, reports, statistics, and inspections.

f. The problem of control resolves into one of devising methods whereby deviations from an approved standard can be detected and corrections made at the earliest time possible. Systems of control usually involve performance measurement and reporting in terms of quantity and quality, and the way in which the resources of men, money, materiel, and facilities are used.

8. DEVELOPING STANDARDS. Control procedures are implemented through standards against which performance can be measured. Standards are a yardstick with which to measure efficiency and progress. They also give subordinates a specific goal to attain. Standards must be representative of the task being performed, and, whenever possible, they should be expressed in measurable terms. For example, the performance standard for a typist might be the number of pages typed per hour.

a. The first essential in setting a standard of output is to find a method of measuring production. A work count may be obtained in various ways, such as the use of standards that have been set for similar operations, past accomplishments as compiled from records and statistics, and estimates based on personal knowledge and experience, or the observation and timing of individuals doing the work.

b. Determining performance standards for individuals and groups whose production cannot be measured in units is more difficult but not impossible. Many supervisory and most middle management and executive positions are of this type. Standards in such cases may be based on methods of performance, planning ability and initiative, ability to speak and write clearly and forcefully, integrity and loyalty to the organization and his superiors, his associates' and subordinates' attitudes toward him, and the morale of his subordinates.

c. Standards and intermediate objectives are determined in the planning phase of management. These same objectives are the intermediate or strategic points at which progress should be measured. Standards of performance should be set up for these same intermediate points and used as a basis for comparing the actual performance against planned performance. Standards are subject to change, of course, and should be re-evaluated periodically.

9. COLLECTING DATA. Having determined the standards against which performance is to be measured and the points at which these measurements are to be made, the next step is to determine how to collect data that will show whether standards are being met. Many managers use both formal and informal sources to obtain data and information. They also use various "experience factors" to keep them posted on performance.

a. Much of the data collected is in terms of either "status" or "trend." Information which shows the current situation or position, or compares the current situation with that previously set forth in the program, indicates the status of an activity. Such data is used to evaluate progress, and the manager takes corrective action when there are deviations from the program. Information which shows the change which has occurred between two periods of time shows the trend. Careful analysis of trend data will often enable the manager to detect potential trouble areas and take corrective action before a problem fully develops.

b. There are various methods of acquiring internal control information and data. Some of the more commonly used methods are staff meetings (daily, semiweekly, weekly), briefings concerning particular activities, committee reports concerning special activities, statistical compilations, and regular and special reports.

c. Time permitting, there is no substitute for personal visits and inspections. By this means the manager assures himself that he is familiar with the steps being taken to accomplish his missions and also can satisfy the need for visual examination of work progress. Control practiced through the use of statistical examination, reports, and personal inspection is desirable, since it combines the analytical efforts of the organization with visual inspection by the manager.

10. CORRECTIVE ACTION.

a. When analysis of performance data reveals a significant deviation from established standards, the reason for the deviation must be determined before corrective action is initiated. The cause will often dictate the remedy. For instance, failure to achieve desired results may be caused by factors beyond the control of the subordinate, such as poor lighting or heating, inadequate equipment, breakdown of equipment, or lack of supplies. The proper corrective action is immediately obvious in such situations.

b. Corrective action may include some modification of plans. When it is not possible to make adjustments to unforeseen changes in external conditions, it will probably be necessary to revise or modify plans in order to overcome or nullify the effects of these changes. For instance, if operations are hampered by a combination of adverse weather and inadequate heating facilities, it may be advisable to change work schedules or to move to a temporary location.

c. Frequently, failure to attain desired goals results from poor direction. When this is suspected, you should discuss with your personnel the requirements of the job and clarify any misunderstanding. Also, you should re-examine your directives and the manner in which they were issued to be sure your desires are clearly stated and have been made known to the persons concerned.

d. In some cases, failure to meet standards is due to inexperienced and untrained personnel. Here, corrective action should consist of providing the training as quickly as possible and, when necessary, giving the individual temporary assistance until he becomes fully qualified. In most instances it is advisable to leave a man on a job if he can learn to handle it in a reasonable period of time and if the situation permits. However, there are times when a subordinate lacks both the skill and the ability to learn to perform a job, or has personality characteristics which make it undesirable for him to continue in a specific job. Reassignment of personnel will usually solve this problem.

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e. When failure to achieve desired results is due to negligence, indifference, or deliberate failure to comply with directives, the corrective action should take the form of administrative discipline, such as reprimand, removal from the job, demotion, denial of certain privileges, restriction of liberties, and similar actions.

f. An organization is successful only to the extent that its members are willing to put forth effort to do their jobs. Failure of the workers to conform to standards may result from misdirected or inadequate motivation. If factfinding shows that this is the trouble, there is a need to re-examine personnel relationships and survey the personnel activities program to see how it can be improved.

g. There are various ways in which corrective action may be initiated. Some of the more frequently used ways are as follows:

(1) A formal written directive may be used.

(2) A less formal memorandum may be used.

(3) The manager may use an oral order. During the course of a briefing, a staff meeting, or a personal inspection, he may inform the responsible individuals of his wishes.

(4) An announcement in the daily bulletin is another method of starting corrective action. Post newspapers or neighboring community papers may be valid and adequate media for initiating corrective action for such matters as routing of traffic, parking, attendance at specific functions, care of buildings and grounds, or safety matters.

(5) Speeches, on formal or semiformal occasions, give the manager an opportunity to explain his missions and his philosophy for mission accomplishment to those having responsibility for implementation. Speeches to the members of the organization on special occasions, such as unit anniversaries, permit the expression of appreciation for work well done and also the furnishing of additional guidance as an aid to even better performance.

h. The function of controlling is one of constant repetition. When the manager is informed of or detects imbalances in performance, he takes corrective action to adjust these imbalances. He may change the basic program in terms of new or adjusted goals or objectives, or in terms of timing or standards of performance. After the adjustments are applied to the program, the program is conducted under the new conditions, and again performance is measured, evaluated, and reported to the manager. Again, imbalances occur and corrective action is taken. Thus control is cyclic in nature and must constantly receive the manager's attention.

11. THE WORK SIMPLIFICATION PROGRAM.

Work simplification in the Army is a planned program of organized effort to make work of any type easier, reduce waste, and find simpler and better ways to do the work. It is aimed at eliminating the nonessential and simplifying the essential.

a. Work simplification is not basically a program to produce more work in less time. It is not a speed-up program, although it often results in production increase. Its objective is to increase a worker's effectiveness rather than his efforts (work smarter, not harder). It also seeks to encourage personnel to think about improving their work and finding better ways to do it. An effective program of work simplification can eliminate wasteful and nonproductive operations and actions. It can improve quality, prevent errors, and increase accuracy. It can eliminate bottlenecks and reduce operating costs. It can help standardize methods, materials, tools, and operating costs. It can make work more interesting, and it can improve morale.

b. The purpose of the Army work simplification program is stated in AR 1-65: "The basic purpose . . . is to provide both military and civilian supervisory personnel with a method for analyzing the way work is done so that a better way can be found for doing it." This will result in more effective use of available resources: manpower, equipment, materials, facilities, and time.

c. Note the use of the word "supervisory" in the statement of purpose. This means work simplification is the responsibility of all supervisors, at all levels. There is a tremendous reservoir of unused ideas in the minds of all people, particularly supervisors. The work simplification program is often the key that unlocks mental inertia and releases creative thinking. Work simplification presupposes that there is "one best way" to do a job--but it must be remembered that this holds good for only one moment in time. Improvement is a never-ending process, and it is important to recognize that better methods are not always readily apparent; they don't just happen--they must be searched for, deliberately and systematically.

12. BASIC STEPS IN METHODS IMPROVEMENT. In a tactical situation, a commander follows a basic pattern in reaching his objective: first, he selects, or is assigned, a mission. Then he makes a reconnaissance of the situation. Third, he determines what courses of action are open to him and analyzes each one. After analyzing them, he selects the best one and formulates a plan. Finally, he executes the plan.

These same five basic steps should be followed in making improvements in a nontactical situation. It is necessary to (1) select the job to be improved, (2) record the job details, (3) analyze the job details, (4) develop the improvements, and (5) install the new method. Followed systematically, these steps may be applied to any nontactical operation.

a. How do you select the job to be improved? Obviously, the jobs which need improvement are those causing the most trouble. There are various clues that help to identify trouble spots. For instance, does performance data show that production is falling below standard? Are backlogs and unfinished work excessive? Are workers using too much time and effort to gather and organize materials and equipment? Is it taking too long to do simple jobs? Are there any below-standard workers? Is morale low? Is there too much tardiness and absenteeism? Are there unused and unnecessary material and equipment in the operating area?

b. After the job is selected, how many of the job details should be recorded? This will depend on the type of job being studied. The principle is to record sufficient information to allow analysis of any detail that [illegible] affect the entire operation. However, this is the factfinding phase, and there should be no attempt to analyze or evaluate at this stage. Job details should be recorded in the order in which they occur. Generally, even details which seem to be unimportant should be recorded, since they may be found to have a bearing on the present or the proposed method.

c. How do you analyze the job details? This is primarily a "why" procedure. To make sure that each detail is essential, ask these questions. What is the purpose of the detail? Why is it necessary? Where should it be performed? Why is that the best place? When should it be done? Why? Who should do it? Why is that person preferable to another? How should it be done? Why should it be done in that manner? Since it is human nature to offer excuses for existing conditions and to resist change, it is necessary to make a clear distinction between facts and opinions during the investigative process.

d. Can improvements be developed on the basis of the first three steps? Yes--if they have been skillfully accomplished. An objective completion of the analysis step invariably furnishes clues to improvements. This relationship may be illustrated this way:

What is the purpose of each detail? . . . .
Why is it necessary? . . . .
} Eliminate unnecessary details.

Where should each detail be performed? . . . .
When should each detail be done? . . . .
Who should do each detail? . . . .
} Combine details if possible. Change for a better sequence.

How should each detail be accomplished? . . . . Simplify when possible.

---

e. The final step in effecting an improvement is to put the new method into operation. Before it is definitely adopted it is advisable to test it, measure its effect on other elements of the organization, and have it reviewed by other operating officials. However, it must be recognized that benefits derived from work simplification sometimes are not immediately measurable in terms of money, material, or time saved. For example, how much is a study worth that results in a more comfortable work area for typists? How do you know exactly what savings result from shortening the distance between the mailroom and the main office? How much is gained by having a good preventive maintenance program for the care of office machines and equipment?

13. WORK DISTRIBUTION CHART (DA Form 673). Just as a combat commander needs reconnaissance photographs to get an idea of the overall situation, so a supervisor needs to get a bird's-eye view of his activity when he is looking for ways to improve methods. The device which will give him this overall picture is the work distribution chart. You will find a sample of this chart in Annex J, perforated for easy removal, to refer to as you study. This chart is used to record and analyze the contribution each individual makes toward accomplishing the work of his unit. There are three basic steps in preparing a work distribution chart: (1) compiling task lists, (2) compiling an activity list, and (3) recording, on the work distribution chart, data from task lists and activity lists.

a. Task list. The supervisor requires each individual in his organization, (including himself), to prepare a task list (fig 1). Each duty and type of work performed should be listed in detail, together with the number of hours per week spent on each. The task list is not a quotation from an MOS or job classification statement; it should be a clear and accurate description of what each person does during the time specified. Actions listed should be specific, such as "type Form 100," not general or ambiguous, such as "administrative services." Tasks are numbered for cross-reference to activities listed on the work distribution chart.

b. Activity list. This list (fig 2) is prepared by the supervisor, and is a listing of the functional work areas in which the tasks are grouped. For instance, keeping time and attendance records, preparing reports, and reviewing reports are tasks which may be grouped under administration and supervision. Also, these tasks may be performed by more than one individual. Forms for both the task list and activity list may be developed and produced locally.

c. Recording data on DA Form 673. The duties shown on the activity list are entered in the left column on the work distribution chart. They may be listed either in the order of their relative importance or according to the number of man-hours required for performance. The work-count and hours-per-week columns in this block are summary columns, and amounts entered are totals of the amounts in corresponding columns in the other blocks. The position columns or blocks are used to identify each individual by name, grade, and title, and to record his tasks and how many hours per week it takes him to perform each task. Tasks are classified in the activity toward which they contribute. Individuals should be listed in the order of their importance to the organization, beginning with the officer in charge.

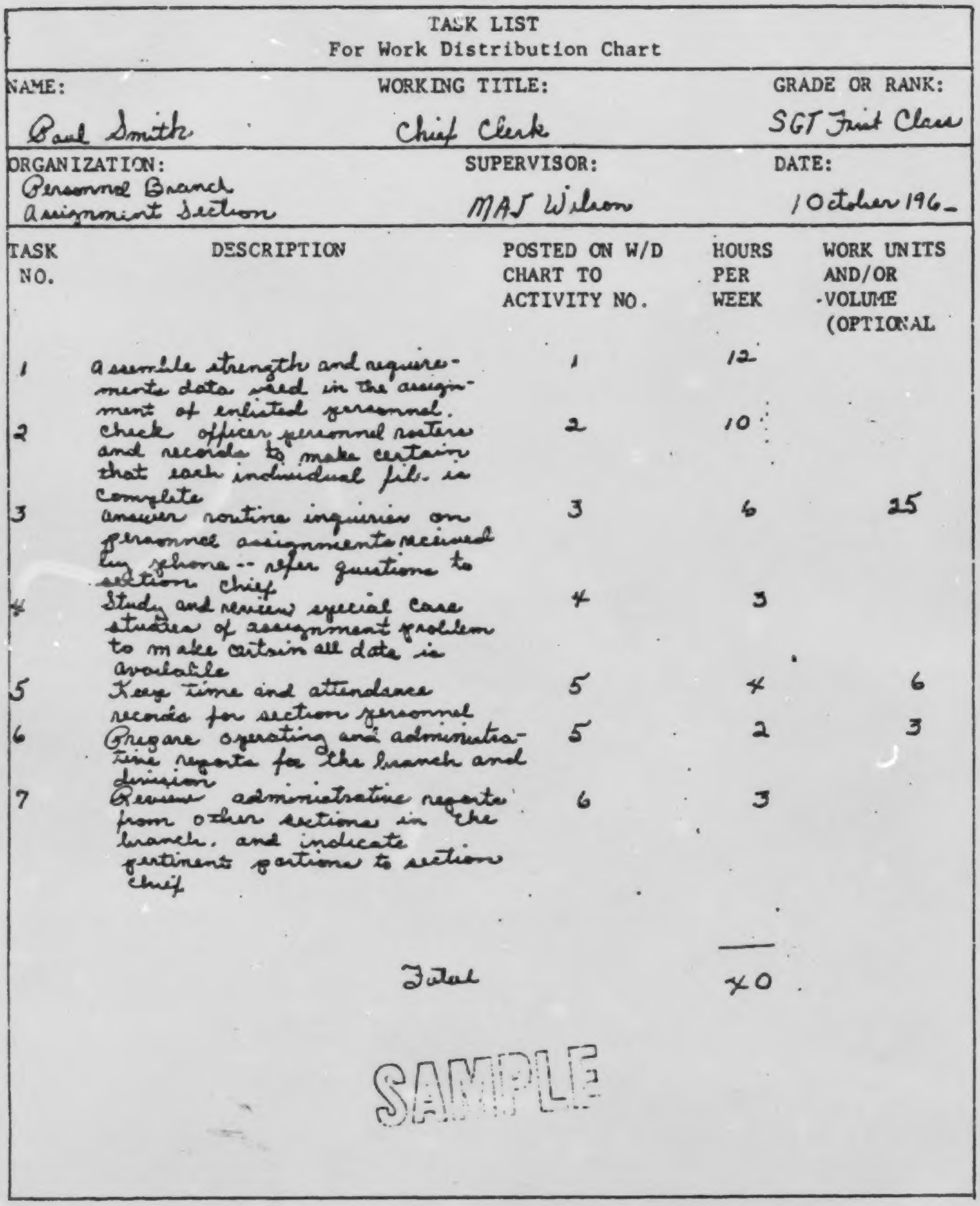
14. ANALYSIS OF CHART. An analysis of the completed work distribution chart (Annex K) will give the supervisor an exact picture of how each individual in his organization divides his time. The supervisor should question each activity and each task related to the activity.

a. What activities take the most time? Are they the ones which should take the most time? Usually, the most time should be spent on the major activity of the organization, and other totals should reflect the relative importance of the various activities. If the chart indicates areas in which too much time is being spent, the supervisor should circle such man-hour totals, to mark them for future process charting and a more detailed analysis.

b. Is there misdirected effort? Is the organization spending too much time on relatively unimportant activities or unnecessary work? Instances of misdirected effort are frequently found in "miscellaneous" or "administrative" categories. The time wasted by any one individual may be small, but it becomes a sizable total when several people are involved. Misdirected effort appears on the work distribution chart when individuals are involved in tasks not contributing directly to the mission of the organization.

c. Are skills being used properly? Are special skills and abilities being wasted? Individuals in higher grade levels should not be required to perform tasks which could be performed by employees in lower grades. Also, it is wasteful to have a person working on a level that is above his ability.

d. Is any one individual doing too many unrelated tasks? A large num-



TASK LIST
For Work Distribution Chart

NAME: Paul Smith

WORKING TITLE: Chief Clerk

GRADE OR RANK: SGT First Class

ORGANIZATION: Personnel Branch Assignment Section

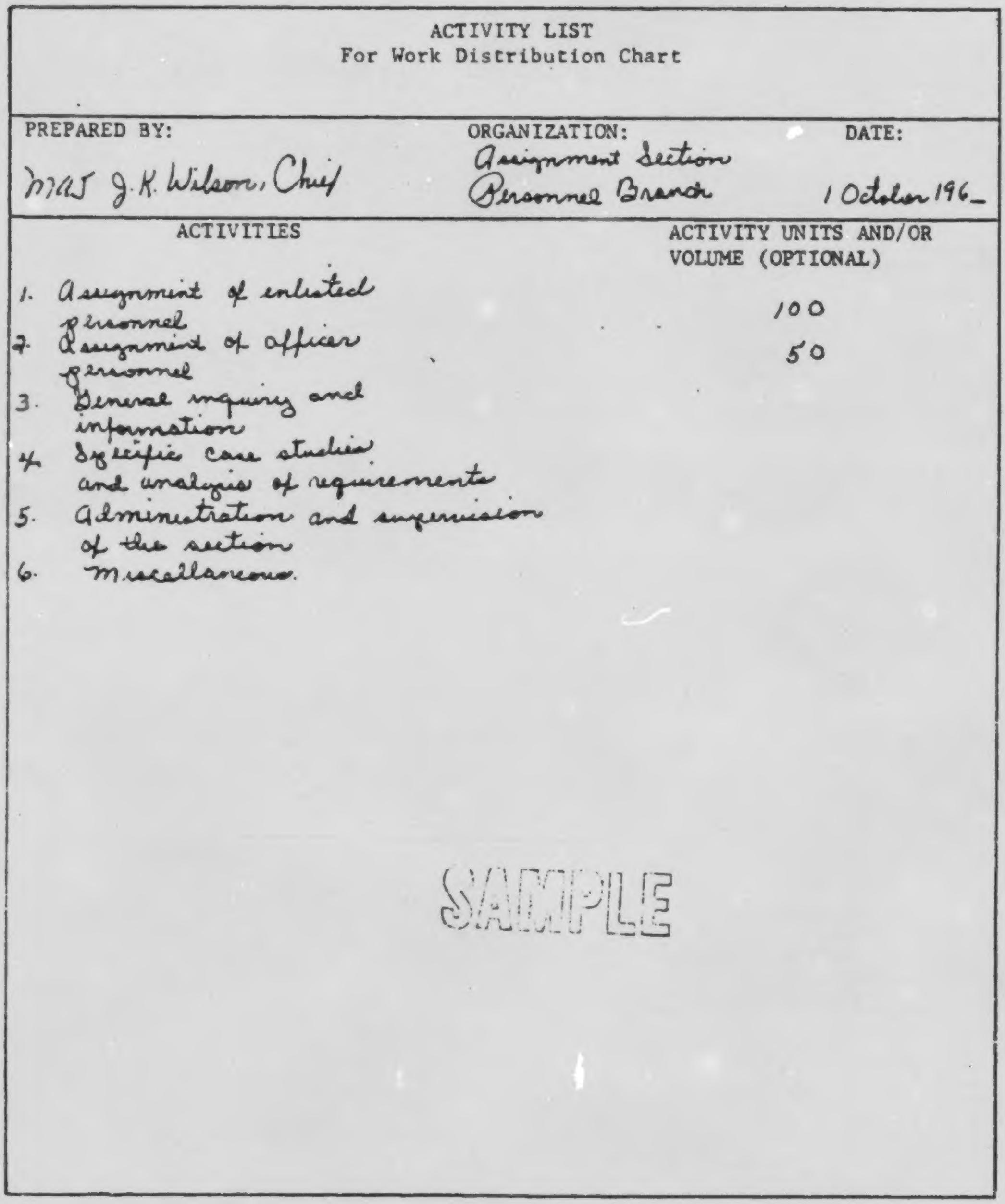
SUPERVISOR: MAJ Wilson

DATE: 10 October 196_

TASK NO.	DESCRIPTION	POSTED ON W/D CHART TO ACTIVITY NO.	HOURS PER WEEK	WORK UNITS AND/OR VOLUME (OPTIONAL
1	Assemble strength and requirements data used in the assignment of enlisted personnel.	1	12	
2	Check officer personnel rosters and records to make certain that each individual file is complete	2	10	
3	Answer routine inquiries on personnel assignments received by phone -- refer questions to section chief	3	6	25
4	Study and review special case studies of assignment problem to make certain all data is available	4	3	
5	Keep time and attendance records for section personnel	5	4	6
6	Prepare operating and administrative reports for the branch and division	5	2	3
7	Review administrative reports from other sections in the branch and indicate pertinent portions to section chief	6	3	
	Total		40	

SAMPLE

Figure 1 Sample Task List.



ACTIVITY LIST
For Work Distribution Chart

PREPARED BY: MAJ J.K. Wilson, Chief

ORGANIZATION: Assignment Section
Personnel Branch

DATE: 1 October 196_

ACTIVITIES	ACTIVITY UNITS AND/OR VOLUME (OPTIONAL)
1. Assignment of enlisted personnel	100
2. Assignment of officer personnel	50
3. General inquiry and information	
4. Specific case studies and analysis of requirements	
5. Administration and supervision of the section	
6. Miscellaneous.	

SAMPLE

Figure 2 Sample Activity List.

ber of activities recorded in any one column on a work distribution chart may indicate that the individual is involved in such a variety of efforts that there is lost motion and resultant waste of manpower. Few individuals can perform a variety of tasks equally well.

e. Are tasks spread too thinly? Performance of the same task by more than one individual may indicate duplication of effort. One person working steadily at a task is more productive than several individuals working intermittently with the same total number of man-hours.

f. Is work distributed evenly? The relative importance of tasks assigned to persons engaged in similar activities should be measured. For example, two clerks of equal ability and grade should usually be charged with similar volumes of work. The urgent and important tasks should be spread as evenly as possible to insure that work is done according to schedule.

15. FLOW PROCESS CHART. Unsatisfactory answers to any of the basic questions indicate areas in which improvement should be made; they pinpoint a process or operation requiring further analysis. A tool which has been developed for this purpose is the flow process chart, DA Form 684 (fig. 4). This chart is a graphic presentation of the steps in a specific operation, from its beginning to its completion. It may be used to chart the actions of an individual or to follow the movement of materials. In addition to its use in connection with the work distribution chart, a flow process chart is a valuable aid in analyzing procedures when a new organizational unit is being established; a major change in personnel, procedures, or workload is taking place; a periodic review of operating methods is being made; or a procedural problem arises.

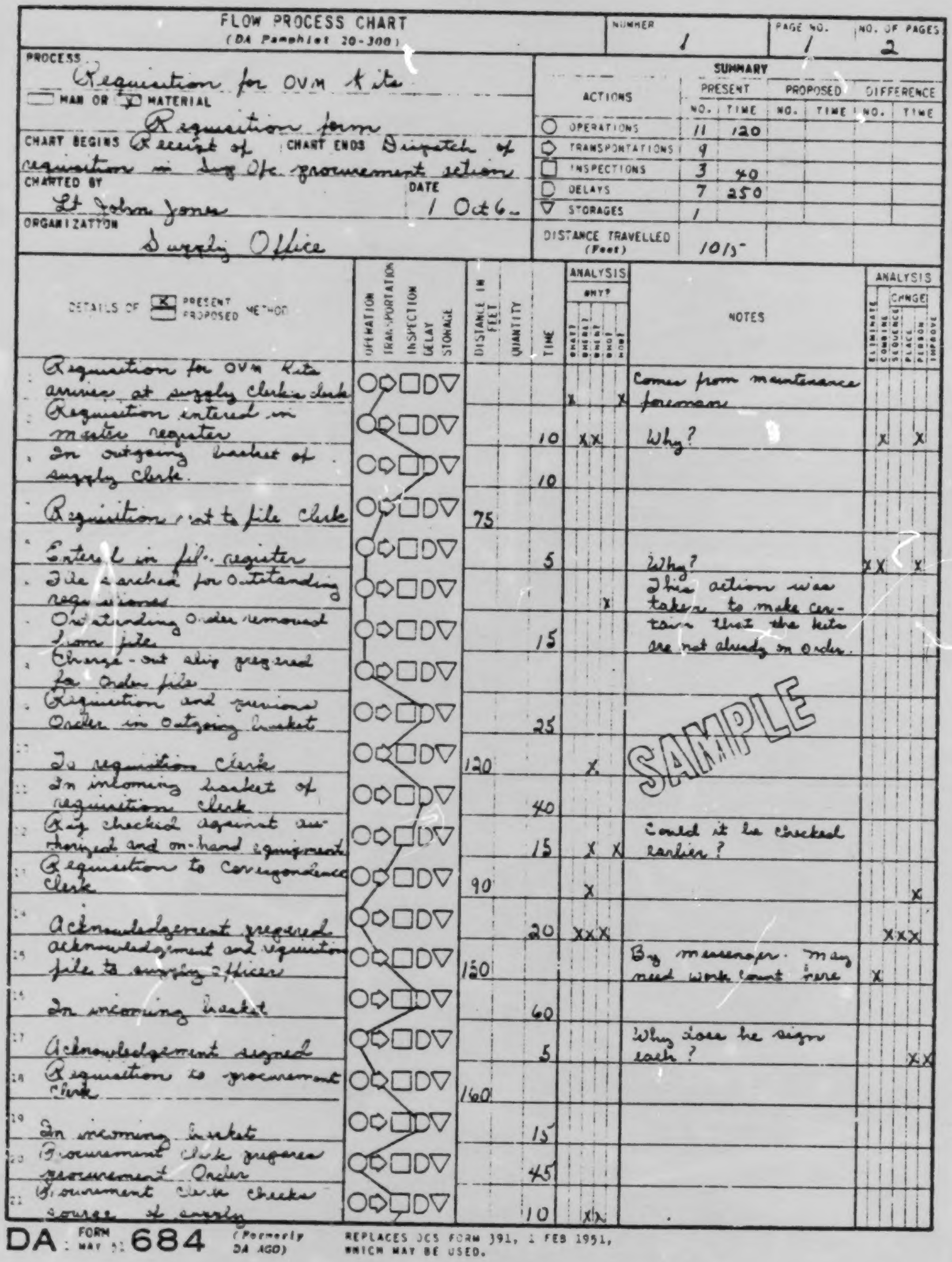
a. The first step in process charting is to describe each task or type of action. Through the use of symbols, the tasks are classified to assist in eliminating, combining, rearranging, and simplifying various processes. A requisition for supplies will serve as an example. The form is removed from a drawer and filled out. This procedure is an "operation." The completed form is then "transported" to another office or desk for "inspection" or verification, and eventually, it is approved. During the process it may be "delayed" by other work. Finally, the form will be "stored" in a file.

b. For uniformity, the symbols used on a process chart have been standardized. These symbols may be used to chart any type of activity within an organization.

(1) An operation is symbolized by a circle, thus: ○. It occurs when an object is intentionally changed in any of its physical or chemical characteristics, is assembled or disassembled from another object, or is arranged or prepared for another operation, transportation, inspection, or storage. An operation occurs also when information is given or received, or when planning or calculating takes place. For example, an operation might consist of typing a letter, crating supplies, repairing a weapon, registering mail, or making a telephone call.

(2) Transportation is symbolized by an arrow, thus: ⇨. It occurs when an object is moved from one place to another, except when such movements are part of the operation or are caused by the operator at the work station during an operation or an inspection. For example, transportation occurs when a letter is carried to another desk, supplies are shipped to a warehouse, or mail is routed.

(3) An inspection is symbolized



FLOW PROCESS CHART
(DA Pamphlet 20-300)

NUMBER 1 | PAGE NO. 1 | NO. OF PAGES 2

PROCESS Requisition for OVM kits

☐ MAN OR ☒ MATERIAL Requisition form

CHART BEGINS Receipt of requisition in Sup Ofc. CHART ENDS Dispatch of procurement action

CHARTED BY Lt John Jones DATE 1 Oct 6_

ORGANIZATION Supply Office

SUMMARY						
ACTIONS	PRESENT		PROPOSED		DIFFERENCE	
	NO.	TIME	NO.	TIME	NO.	TIME
○ OPERATIONS	11	120				
⇨ TRANSPORTATIONS	9					
□ INSPECTIONS	3	40				
D DELAYS	7	250				
▽ STORAGES	1					
DISTANCE TRAVELLED (Feet)	1015					

DETAILS OF ☒ PRESENT ☐ PROPOSED METHOD	OPERATION TRANSPORTATION INSPECTION DELAY STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT? WHERE? WHEN? WHO? HOW?	NOTES	ANALYSIS CHANGE ELIMINATE COMBINE SEQUENCE PLACE PERSON IMPROVE
1 Requisition for OVM kits arrives at supply clerk's desk	○ ⇨ □ D ▽				X X	Comes from maintenance foreman	
2 Requisition entered in master register	○ ⇨ □ D ▽			10	XX	Why?	X X
3 In outgoing basket of supply clerk	○ ⇨ □ D ▽			10			
4 Requisition sent to file clerk	○ ⇨ □ D ▽	75					
5 Entered in file register	○ ⇨ □ D ▽			5		Why?	XX X
6 File searched for outstanding requisitions	○ ⇨ □ D ▽				X	This action was taken to make certain that the kits are not already on order.	
7 Outstanding order removed from file	○ ⇨ □ D ▽			15			
8 Charge-out slip prepared for order file	○ ⇨ □ D ▽						
9 Requisition and previous order in outgoing basket	○ ⇨ □ D ▽			25			
10 To requisition clerk	○ ⇨ □ D ▽	120			X		
11 In incoming basket of requisition clerk	○ ⇨ □ D ▽			40			
12 Req checked against authorized and on-hand equipment	○ ⇨ □ D ▽			15	X X	Could it be checked earlier?	
13 Requisition to correspondence clerk	○ ⇨ □ D ▽	90			X		X
14 Acknowledgement prepared	○ ⇨ □ D ▽			20	XXX		XXX
15 Acknowledgement and requisition file to supply officer	○ ⇨ □ D ▽	150				By messenger. May need work count here	X
16 In incoming basket	○ ⇨ □ D ▽			60			
17 Acknowledgement signed	○ ⇨ □ D ▽			5		Why does he sign each?	XX
18 Requisition to procurement clerk	○ ⇨ □ D ▽	160					
19 In incoming basket	○ ⇨ □ D ▽			15			
20 Procurement clerk prepares procurement order	○ ⇨ □ D ▽			45			
21 Procurement clerk checks source of supply	○ ⇨ □ D ▽			10	XX		

SAMPLE

DA FORM MAY 51 684 (Formerly DA AGO) REPLACES DCS FORM 391, 1 FEB 1951, WHICH MAY BE USED.

(Face)

Figure 4. Sample Flow Process Chart--Present Procedures.

	DETAILS OF ☒ PRESENT ☐ PROPOSED METHOD	OPERATION TRANSPORTATION INSPECTION DELAY STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY?					NOTES	ANALYSIS CHNGE					
						WHAT?	WHERE?	WHEN?	WHO?	HOW?		ELIMINATE	COMBINE	SEQUENCE	PLACE	PERSON	IMPROVE
22	Procurement form and requisitions to requisition clerk	○ [✓ ⇨] □ D ▽	150					X	X								
23	Complete file is audited	○ ⇨ [✓ □] D ▽			15			X	X		Get more information on audit step	X					X
24	File sent to supply officer	○ [✓ ⇨] □ D ▽	150								By messenger						
25	In incoming basket	○ ⇨ □ [✓ D] ▽			90												
26	Supply officer signs procurement order.	[✓ ○] ⇨ □ D ▽			5						Should he sign all orders?						X
27	In outgoing basket	○ ⇨ □ [✓ D] ▽			10												
28	Completed file to requisition clerk	○ [✓ ⇨] □ D ▽	120				X		X		For dispatch. Can file clerk do this step?					X	X
29	Assembles action and file copies	[✓ ○] ⇨ □ D ▽			5												X
30	Action copies dispatched	[✓ ○] ⇨ □ D ▽			10												
31	File copies to file clerk	○ ⇨ □ D [✓ ▽]															
32		○ ⇨ □ D ▽															
33		○ ⇨ □ D ▽															
34		○ ⇨ □ D ▽															
35		○ ⇨ □ D ▽															
36		○ ⇨ □ D ▽															
37		○ ⇨ □ D ▽															
38		○ ⇨ □ D ▽															
39		○ ⇨ □ D ▽															
40		○ ⇨ □ D ▽															
41		○ ⇨ □ D ▽															
42		○ ⇨ □ D ▽															
43		○ ⇨ □ D ▽															
44		○ ⇨ □ D ▽															
45		○ ⇨ □ D ▽															
46		○ ⇨ □ D ▽															
47		○ ⇨ □ D ▽															
48		○ ⇨ □ D ▽															

SAMPLE

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(Reverse)

Figure 4. Continued.

05

by a square, thus: □. It occurs when an object is examined for identification or is checked for quality or quantity in any of its characteristics. For example, inspection occurs in proofreading a letter, checking weight of supplies prior to shipment, or testfiring a weapon.

(4) A delay is symbolized by a block-letter D, thus: **D** It occurs when conditions, except those which intentionally change the physical or chemical characteristics of the object, do not permit or require immediate performance of the next planned action. For example, there is a delay when a letter is in an outgoing box waiting for a messenger, there is an assembly line breakdown, or an item is being held to prepare a complete shipment.

(5) Storage is symbolized by an inverted pyramid, thus: ▽. It occurs when an object is retained and protected against unauthorized removal, or stored in a file. For example, storage occurs when correspondence is placed in a permanent file or when supplies are placed in a warehouse, pending issuance.

c. A flow process chart is prepared in the following way:

(1) Fill in the information requested in the upper left corner of the form. (The form is designed to record the steps in a single process only, and can be used for either present or proposed procedures.) Information should be specific as to identification of the process, the person or material being charted, and the places or times that the process begins and ends.

(2) List each detail of the process in brief narrative form in the left column on the chart. Details should be clear, specific, and listed in the sequence in which they occur. The value of a process chart lies in the accuracy with which it portrays the details of a procedure.

(3) Classify each detail by relating it to the appropriate procedural symbol, and draw a line connecting the symbols throughout the sequence of actions.

(4) The columns "Distance in feet," "Quantity," and "Time" are completed whenever appropriate.

(5) Summarize in the upper right corner of the form the total actions in each procedure.

d. In analyzing the process chart, each detail of the process as it is now being performed is questioned.

(1) Why is it necessary? Can the process or steps be eliminated? This is the basic, overall question.

(2) What is done? What are the steps? Are they all included? What are the pertinent facts?

(3) Where should this be done? Can or should it be done in another place?

(4) When should this be done? Is it done in the right sequence? Can it be combined or simplified by moving it ahead or back?

(5) Who should do the job? Is the right person handling it, or can someone else do it better?

(6) How is the job being done? Can it be done better with different equipment or a different layout?

During the analysis process, pertinent notations are made in the "Notes" column. These should provide the clues to possible improvements. When results of the analysis show how improvements can be made by eliminating, combining, rearranging, and simplifying the details and groups of details, the proposed new method is charted.

e. Figure 4 portrays present procedures in an activity, and figure 5 shows the final, typed flow process chart of the proposed procedures. The improvements illustrated result in a saving of 125 minutes of time and 400 feet of distance traveled. These savings were accomplished by eliminating one of the registrations, combining certain steps, and changing the sequence to provide a smoother flow of work. Grouping productive operations reduces transportations, delays, and wasted effort.

16. LAYOUT STUDIES. Closely allied with the work distribution chart and the flow process chart is the layout study, which is an analysis of the flow of materials, transportation, distances, and space arrangements in a selected work area. This tool of work simplification is devised to show the supervisor how to provide the greatest physical ease for the largest number of individuals, and to permit as straight and short a distance as possible for the processing and travel of materials, documents, personnel, and related activities. Often, a poor arrangement of facilities makes the difference between a smoothly operating procedure and an inefficient one (fig 6). The ideal physical layout cannot always (or even often) be achieved. Usually, there is a difference between the desirable and the available type and amount of space and equipment. Frequently, several different operations must be performed in the same work area and with the same facilities. However, there are certain basic principles of layout that should be considered in any physical arrangement of a work area. It is usually possible to make improvements when these principles are followed.

a. Use one large area in preference to an equivalent amount of space that is broken up. This will result in better lighting, ventilation, supervision, and communication.

b. Use a uniform size of desks in any one area. This gives a better appearance and promotes a feeling of equality among the personnel.

c. Use straight symmetry; avoid jogs, offsets, and angle arrangements.

d. Provide for work to flow in straight lines as nearly as possible. Avoid backtracking, crisscrossing, and unnecessary transportation of papers and other materials.

e. Have the work come to the worker, not the worker go to the work.

f. Keep jobs of a similar nature in near relationship.

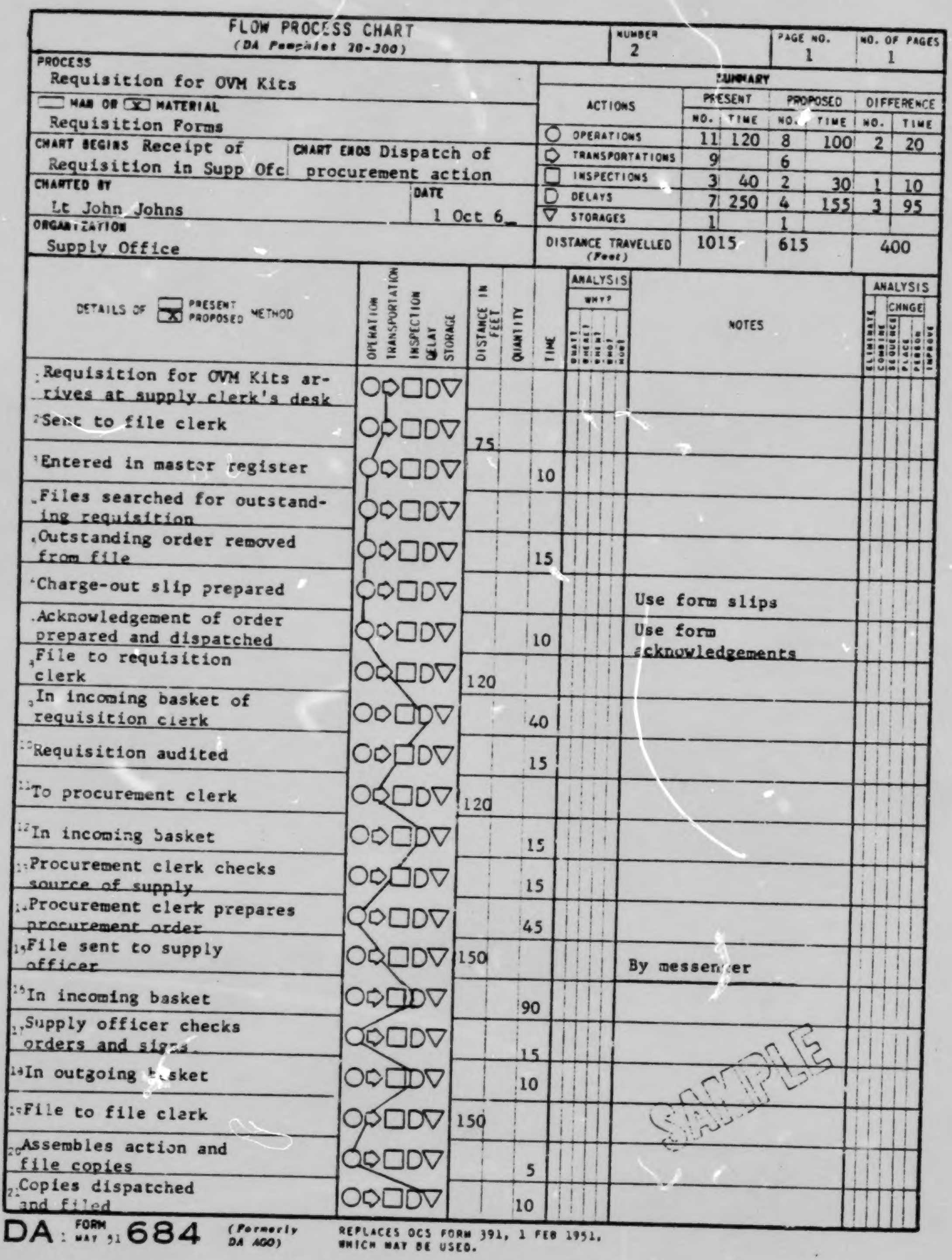
g. Locate supervisors where they can easily observe what goes on in their work areas.

h. Place individuals so that they do not face each other.

i. Arrange workers so that ample natural light comes over the left shoulder. An individual should not face a window while working.

j. Avoid locating private offices where they will deprive a general office area of natural light.

k. Locate individuals receiving visitors, or required to maintain outside contacts, near entrances.



FLOW PROCESS CHART (DA Pamphlet 20-300)	NUMBER 2	PAGE NO. 1	NO. OF PAGES 1

PROCESS Requisition for OVM Kits		
☐ MAN OR ☒ MATERIAL Requisition Forms		
CHART BEGINS Receipt of Requisition in Supp Ofc	CHART ENDS Dispatch of procurement action	
CHARTED BY Lt John Johns	DATE 1 Oct 6_	
ORGANIZATION Supply Office		

SUMMARY

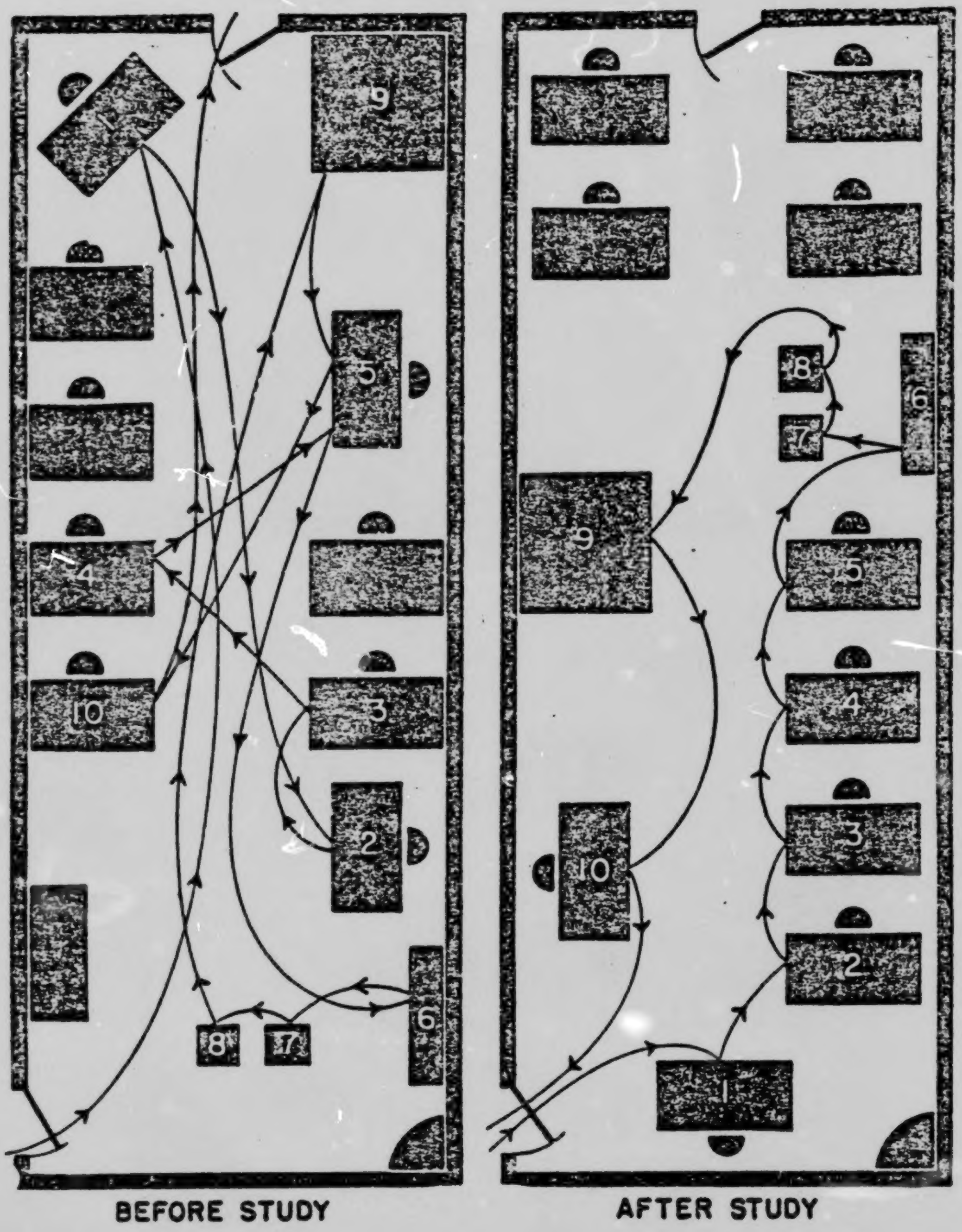
ACTIONS	PRESENT NO.	PRESENT TIME	PROPOSED NO.	PROPOSED TIME	DIFFERENCE NO.	DIFFERENCE TIME
○ OPERATIONS	11	120	8	100	2	20
⇨ TRANSPORTATIONS	9		6			
□ INSPECTIONS	3	40	2	30	1	10
D DELAYS	7	250	4	155	3	95
▽ STORAGES	1		1			
DISTANCE TRAVELLED (Feet)	1015		615		400	

DETAILS OF ☐ PRESENT ☒ PROPOSED METHOD	OPERATION TRANSPORTATION INSPECTION DELAY STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	NOTES	ANALYSIS ELIMINATE	COMBINE	CHNGE SEQUENCE	PLACE	PERSON	IMPROVE
1 Requisition for OVM Kits arrives at supply clerk's desk	○ [✓ ⇨] □ D ▽															
2 Sent to file clerk	○ [✓ ⇨] □ D ▽	75														
3 Entered in master register	[✓ ○] ⇨ □ D ▽			10												
4 Files searched for outstanding requisition	[✓ ○] ⇨ □ D ▽															
5 Outstanding order removed from file	[✓ ○] ⇨ □ D ▽			15												
6 Charge-out slip prepared	[✓ ○] ⇨ □ D ▽									Use form slips						
7 Acknowledgement of order prepared and dispatched	[✓ ○] ⇨ □ D ▽			10						Use form acknowledgements						
8 File to requisition clerk	○ [✓ ⇨] □ D ▽	120														
9 In incoming basket of requisition clerk	○ ⇨ □ [✓ D] ▽			40												
10 Requisition audited	○ ⇨ [✓ □] D ▽			15												
11 To procurement clerk	○ [✓ ⇨] □ D ▽	120														
12 In incoming basket	○ ⇨ □ [✓ D] ▽			15												
13 Procurement clerk checks source of supply	○ ⇨ [✓ □] D ▽			15												
14 Procurement clerk prepares procurement order	[✓ ○] ⇨ □ D ▽			45												
15 File sent to supply officer	○ [✓ ⇨] □ D ▽	150								By messenger						
16 In incoming basket	○ ⇨ □ [✓ D] ▽			90												
17 Supply officer checks orders and signs.	[✓ ○] ⇨ □ D ▽			15												
18 In outgoing basket	○ ⇨ □ [✓ D] ▽			10												
19 File to file clerk	○ [✓ ⇨] □ D ▽	150														
20 Assembles action and file copies	[✓ ○] ⇨ □ D ▽			5												
21 Copies dispatched and filed	○ ⇨ □ D [✓ ▽]			10												

SAMPLE

DA FORM 1 MAY 51 684 (Formerly DA AGO) REPLACES OCS FORM 391, 1 FEB 1951, WHICH MAY BE USED.

Figure 5. Sample Flow Process Chart--Proposed Procedures.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BEFORE STUDY

AFTER STUDY

Figure 6. Process Chart of Office Layout and Flow of Work.

l. Locate files, cabinets, etc., near workers who use them most frequently.

m. If a counter is required, consider providing it with drawers or shelving space.

n. Be sure that there are no surplus facilities or equipment (furniture, tools, etc.) occupying floorspace.

17. OFFICE LAYOUT. When making the office layout, use a systematic approach to the problem. The first step is to make a layout chart, which is a plan or sketch of the area upon which the flow of work may be traced. Templates or overlays may be used to determine the best arrangement of facilities, equipment, and personnel.

a. Determine the areas of main traffic movement.

b. Gain a complete, overall picture of the work to be done in the area.

c. Determine the quantity, size, and type of physical units to be included.

d. Identify the basic groups making up the office.

e. Consult with the head of each basic group.

f. Formulate tentative answers regarding the use or nonuse of private offices for each basic group.

g. Make templates to scale of all physical units and identify them clearly. With the accurate and complete floor plans of the building or area drawn to scale (one-half or one-fourth inch to 1 foot is suggested), place templates on the floor plan to experiment with various possible arrangements of the physical units. (A template is a scaled pattern representing a physical unit. It is a clearly identified separate representation of each desk, chair, filing cabinet, or other item that must be placed.) These templates may be squares or rectangles, but should be on the same scale as the drawing. Shifting templates around on the outline plan of the area permits selection of the best arrangement. Using the layout chart and templates, the various components and equipment of the office can be tentatively located.

h. When the preliminary arrangement has been decided, such fixtures as electrical outlets, telephones, radiators, lighting fixtures, and coatracks should be sketched in. Probable flow of work may be shown by means of thread or colored lines.

An example of the need for careful space layout is the placement of the central mailroom of the mail and records section which, since it is the funnel of incoming and outgoing business, is the hub of the office arrangement. For convenience to messenger service and to minimize the distraction of deliveries, this center should be located near an entrance. Yet, for accessibility to the office personnel, it should be located centrally. Consequently, to satisfy both considerations, considerable shifting and experimenting may be necessary.

In figuring the space requirements, sufficient aisle space must be allowed to avoid congestion and to make it easy to move between desks and operations. Cross-aisles may be used to shorten travel distances for workers, provide adequate space around the files, and plan for such matters as the traffic routes to telephones, restrooms, and exits.

18. APPLICATION OF OFFICE LAYOUT PRINCIPLES. While it is recognized that all decisions are vitally affected by the space available and the floor plan of the office area, four interrelated factors must be given careful consideration in deciding on the physical layout of the office--function, including accessibility; control; appearance; and environment.

a. Function. After the amount of available space has been determined, the dominant consideration must be the various functions of the office and the personnel to insure that the layout follows the procedural flow as closely as possible and provides for documents and materials to move in as straight a line as possible.

b. Control. The work must be controlled--administered and supervised--by responsible key personnel. Therefore, the location of these controlling persons must be duly considered in the office arrangement. The term "control" as used here means also the frequency of contacts: the frequency with which an individual has to be consulted. One obvious principle in the consideration of control is that an individual must be placed conveniently near the activity that he controls. For instance, it is advisable that the person in charge of supplies be located near the supplies and that a supervisor charged with operating a typing pool be near the typists.

The office manager's desk should be readily accessible to visitors and to his subordinate supervisors in the section. It should be sufficiently private to permit undisturbed thinking, discussion of confidential and personal matters, and dictation of correspondence without disturbing other workers. An operating supervisor--that is, a division or branch chief--should generally be located with or near the activity he supervises.

In some major headquarters private offices may be justified by the need for concentration and confidential work; however, the offices of those managers or supervisors who are largely concerned with administrative control, operation, and direct supervision should be located near the activities and people they control. A private office is costly in that it usually requires additional equipment and facilities, frequently interferes with effective use of the general office area, permits less supervision of and by the occupant, and always occupies space that is otherwise adequate for two or three people. In allocating office space, observe the purely utilitarian rule: "Is a private office necessary to get this job done?"

c. Appearance. After deciding the matters of function and control, the outward appearance should be considered. Such necessary matters as cleanliness and orderliness should occur automatically to all Army personnel. Grouping desks and chairs of the same type, finish, color, and size into one section will improve the appearance of the office. If consistent with the functional considerations, the layout should strive for straight symmetry in the arrangement of desks and equipment, avoiding offsets, jogs, and angle arrangements.

Arrangement of desks within divisions and sections of an office should usually be left to the discretion of the respective chiefs, with placement consistent with the overall plans and with function more important than appearance. Careful attention to this matter of appearance--including such details as bulletin boards, signs, coatracks, and unobstructed aisles--will be reflected in improved attitudes and higher morale of the workers. The entire office should appear, and be, efficient and businesslike.

d. Environmental factors. An office manager is obligated to provide working conditions that will promote efficiency and reduce individual strain and fatigue. The working environment should be as pleasant, comfortable, healthful, and conducive to good work habits as is possible. The matters of sanitation, safety, and cleanliness are well cared for by established Army policy and standards. The manager usually has little to say about such items as furniture or wall and floor coverings, but he does have considerable control over, and must pay particularly careful attention to, the environmental factors of light, heat, ventilation, noise control, convenience, and comfort.

(1) Light. Poor lighting can result in work errors, lower productivity, eyestrain, frayed nerves, fatigue, and defective vision. Maximum use should be made of natural light by avoiding blocking off windows with such office furniture as filing cabinets and by arranging the desks so that the workers' backs are to the window, or so that the light comes over their left shoulders. Daylight from the north is preferred, followed in order of preference by eastern, southern, and western exposures.

In most offices the natural light must be supplemented by artificial light, preferably of the indirect or semidirect type that affords more evenly distributed and diffused illumination than does direct lighting. Desk lamps may be needed for isolated desks, some private offices, and certain detailed operations.

The quality and quantity of illumination should be governed by the type of work done, with due consideration for those who have defective vision. The least that can be done is to place personnel in such positions as to give them maximum benefit of light without facing light sources. Corrections, sometimes effected simply by shifting or relocating the desks, should be made to prevent glare, harsh shadows, and uneven distribution of available light.

(2) Heat. When the temperature drops below 60 degrees Fahrenheit, all office work is affected and productivity is decreased. Similarly, any temperature above 76 degrees must be considered excessive because it causes discomfort, drowsiness, and a drop in productive capacity. Provision must be made for a dependable supply of sufficient heat during the winter months, preferably at an inside temperature of about 70 degrees Fahrenheit.

(3) Ventilation. Adequate ventilation must be provided at all times. Lack of ventilation makes the workers feel lethargic and unduly tired. Airing the office, during winter, by opening all windows for a few minutes during the break and lunch periods will help expel stale air and freshen the office.

(4) Noise abatement or elimination. A noisy office is seldom an efficient office. An office manager has four means of reducing noises: (a) move the entire office to a quieter area, (b) have the floors, walls, and ceilings covered with material to deaden the noise, (c) reduce or eliminate the sources of the noise, or (d) segregate the sources of noise from the rest of the office. An Army office manager can seldom apply the first two corrective measures, but usually he can make use of the third and fourth measures.

If possible, the office manager

should isolate noisy operations, such as teletype, mimeograph, and adding machine, and typing pools. He should discourage unnecessary noises such as slamming doors and loud talking and laughing in the office. Sufficient aisle space should be provided so that there is no undue congestion or noise disturbance from movement. Because of the noise of traffic, the central mailroom and the information office (if any) should be located near the entrance. In addition, personnel who frequently have visitors or make outside contacts should be located near entrances whenever possible. Much of the disturbance from visitors and traffic can be avoided by placing identifying signs in appropriate places to guide visitors and messengers.

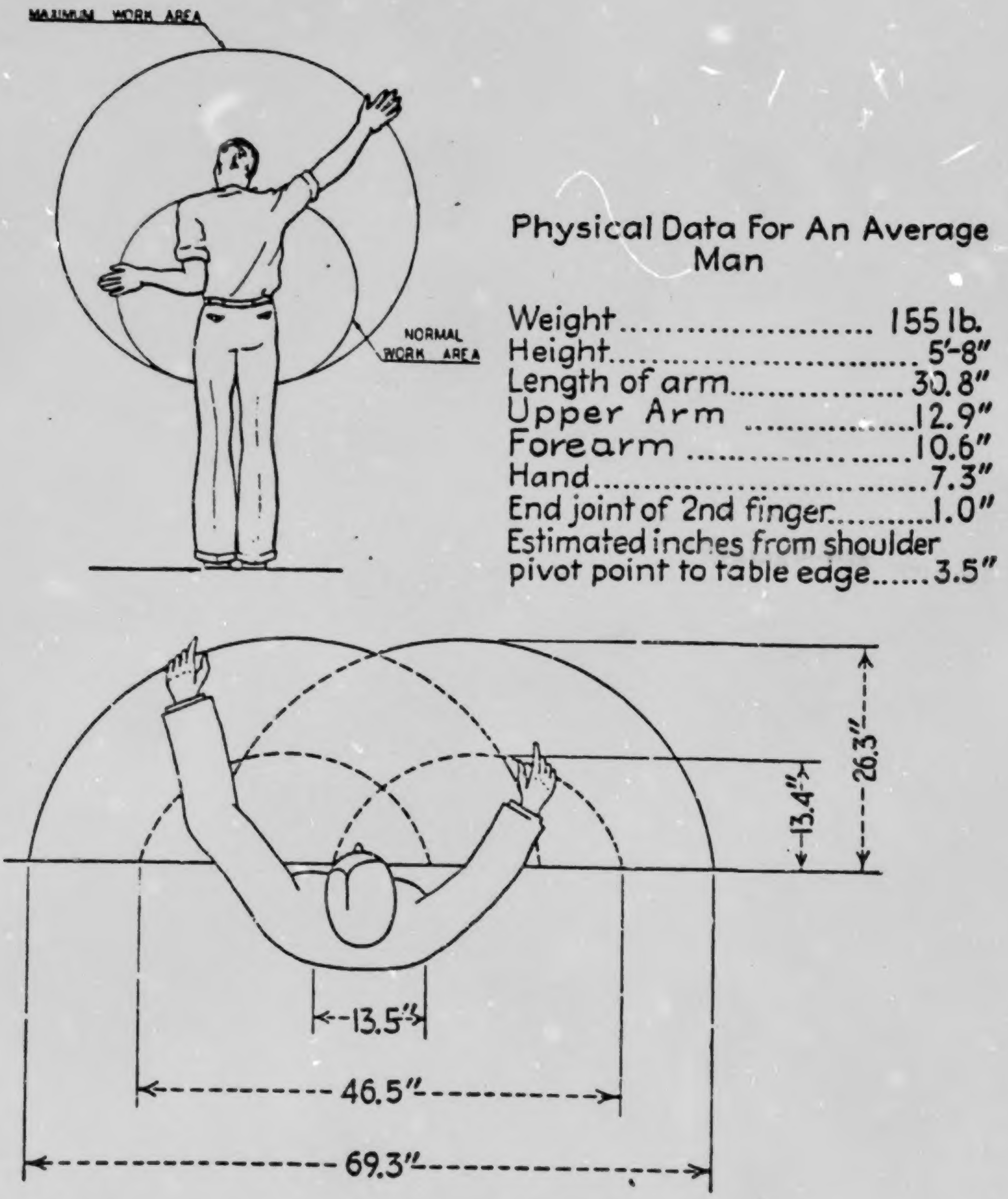
If one room must be near a street from which traffic noises may disturb a quiet operation, such as a planning office, then that exposed room should be used for a relatively noisy operation, such as the use of reproduction equipment.

(5) Convenience and comfort. Careful thought must be given to the placement of items used in common. The office manager should plan for the location of such items as pencil sharpeners, clocks, dictionaries, coatracks, and reference materials--they should be centrally located, yet closest to those persons who use them most often. In line with the maintenance of high morale, he should try to provide such facilities as lounges or snackbars. Most offices authorize periodic rest periods, usually a short "coffee break" in the morning and afternoon, particularly if the personnel are engaged in monotonous or tedious work.

e. Integration of factors. Related to the preceding discussion is the fundamental principle that the allocation of space should be in keeping with the requirements of the work--that is, the best lighted, best ventilated, and least noisy space should be used for work requiring closest attention and concentration. An office manager should arrange for the best possible integration of function, appearance, control, and environment, giving due consideration to the needs of each organizational element.

19. MOTION ECONOMY. Motion economy is concerned with determining the area in which an individual can work most efficiently, and what procedures he should follow to get his work done with a minimum of physical effort. Motion study consists of dividing work into the most fundamental elements possible; studying these elements separately and in relation to one another; and from these studied elements, when timed, formulating improved methods. The physiological-environmental factors (the effect of noise, lighting, ventilation, and temperature) and the limits of the working area must be considered, as must the extent to which specific parts of the body are involved in motion, including determination of whether motions are performed with the right or left hand. This study of the details of any physical activity for the purpose of developing a better and easier method has the objective of elimination of waste motion, time, and effort. Time and motion studies have their greatest use in the operation of mechanical equipment, or other actions of a repetitive nature. The principles may be applied, however, to most types of office work.

a. The "average" employee is the standard. Physical data for an "average man" are included in figure 7. A motion study should develop the best method of performance by a normal, average person without special skills


MAXIMUM WORK AREA
NORMAL WORK AREA
26.3"
13.4"
13.5"
46.5"
69.3"

Physical Data For An Average Man

Weight	155 lb.
Height	5'-8"
Length of arm	30.8"
Upper Arm	12.9"
Forearm	10.6"
Hand	7.3"
End joint of 2nd finger	1.0"
Estimated inches from shoulder pivot point to table edge	3.5"

Figure 7. Normal Working Areas.

or involved training. To choose the above-average, or the best qualified, would put the scale requirements too high; to choose the below-average, or the least qualified, would put the scale requirements too low.

b. The time and motion study should be objective without consideration of the occupant of the position or any other individual. Yet full advantage must be taken of suggestions from the operating personnel themselves; in fact, the best experimentation and ideas may originate with them. The personnel should, therefore, be motivated to seek means of eliminating waste time and motion. Although there may be some instances of resistance to examination of the manner in which a person performs his duties, it is axiomatic that people believe in something in direct proportion to the extent to which they are part of it; therefore, the interested cooperation and participation of the concerned operating personnel must be obtained.

c. A full description of the techniques of motion economy is beyond the scope of this explanation. However, study and application of the basic principles will help to develop better, easier methods of work.

(1) Physical activity or motion, to be fully productive, requires prepositioning materials and tools with "a place for everything and everything in its place." Long reaches, hunting for materials or tools, and carrying products any farther than is absolutely necessary must be avoided.

(2) The composite motion pattern (the total of all the motions involved in the operation being observed or studied) should be arranged to permit a rhythmic, smooth flow of motion in the work.

(a) Both hands should begin movements simultaneously.

(b) Both hands should complete their movements at the same time.

(c) Both hands should not be idle at the same time.

(d) Motions of the arms should be in opposite and symmetrical directions and should be made simultaneously.

(e) There should be no hesitations, motions with sudden stops, or abrupt changes in direction.

(f) Straight line motions requiring sudden changes in direction are not as desirable as continuous, curved motions.

(g) The sequence of motions should be arranged, as far as possible, to make the rhythm automatic.

(3) The fewer the body movements, the faster is the motion. Therefore, motion should be as simple as possible. For example, motions involving the hands are classified, in order of economy, as follows:

(a) Finger motions only.

(b) Finger and wrist motions.

(c) Finger, wrist, and forearm motions.

(d) Finger, wrist, forearm, and upper arm motions.

(e) Finger, wrist, forearm, upper arm, and shoulder or body motions (which, unlike the other four classes, require a change in position).

(4) Sliding, rather than carrying,

is usually a quicker way to transport objects. Gravity should be used wherever possible.

(5) The individual should be comfortable and at ease, with proper physiological-environmental conditions, including a desk or workplace of correct height and size.

(6) The flow and backlog of work should be regulated permitting neither idle stretching-out of the operations nor such intense demands that the worker is placed under mental and physical tension that interferes with good motion habits.

d. Even if no formal motion economy study is made of the various office operations, the manager, supervisors, and individual workers can apply the foregoing principles to various jobs. For example, motion economy principles can be used to increase efficiency by decreasing "make-ready" and "put-away" time. Every job involves these three steps:

(1) "Make-ready" or "take-out," which is the act of assembling material, setting up equipment, arranging for personnel to do the job, and such preparatory office operations as recording incoming mail and obtaining personnel jackets from the central files.

(2) "Do," which is the actual accomplishment of the work, such as making decisions or taking action.

(3) "Put-away," which is the clean-up phase, such as dispatching replies and returning jackets to the files.

In some instances, an operation can be broken down into further elements, such as "preparatory," "arranging," "searching and finding," "doing work," "removing," and "adjusting," as would be done when deriving a standard practice guide and timing the steps. Many office workers use too much time in the "make-ready" and "put-away" steps. Obviously, any time saved in these steps will result in increased speed and production. Systematic efforts to shorten and combine or eliminate the "make-ready" and "put-away" time usually will result in immediate improvement.

e. Related directly to motion economy and to decreasing "make-ready" and "put-away" time is the individual layout of work materials. The effectiveness of personnel can be materially increased, and the time required to process work decreased, by attention to simple details of the layout of equipment and materials used by each person in his work. Obviously, an improved layout arrangement will also decrease the time required for the "do" step of the work. Individuals should periodically examine the arrangement of materials in their work areas, discard or store materials not needed in their usual work routines, and arrange needed materials for maximum convenience and availability. Each person should check to be sure that his work layout conforms to these patterns:

(1) Frequently used materials should be located in the normal work area--that area covered by an arc made by the hands when the arm is extended from the elbow.

(2) Occasionally used materials, those which are used occasionally each day, should be located within the maximum work area: that area which is within reach when the arm is extended from the shoulder.

(3) Seldom used materials should be kept off the work surface.

20. WORK MEASUREMENT. Work measurement is the method used to determine the amount or quantity of work accomplished by an individual or group of individuals. Work measurement provides a time standard for performing work of an acceptable quality. It informs management of the performance effectiveness of the work force.

a. Work measurement produces the ratio of the number of man-hours that should have been spent, based on a time standard, to the number of man-hours actually expended producing work units completed during a reporting period.

b. A variety of techniques can be used to perform work measurement. Some techniques require more time and money to establish than do others.

c. Validity and reliability are some of the criteria used to check various tests. Validity means that the test measures what it is intended to measure. Suppose that we want to time or measure how long it takes a mechanic to replace a set of spark plugs; we will time the operation of replacing spark plugs, being certain to time this operation only on cars with the same number of spark plugs. Reliability means that the same results will always be obtained if the tests are conducted under similar conditions. If we time five machine operators and find that they produce 20 units per hour, another set of inspectors should get the same results; 20 units per hour, from the same group under the same conditions.

21. WHERE TO USE WORK MEASUREMENT. Most activities are measurable. Many are easy to measure and the cost is low. But there are some activities which are very difficult to measure satisfactorily, and the cost may be high compared to the benefits derived. Repetitive kinds of work are usually the easiest and least costly to measure. However, techniques for measuring nonrepetitive work are widely used, and the cost to administer these procedures has dropped sharply. Much of the work in offices and job shops is nonrepetitive yet is being successfully measured in many organizations. Today it is not a question of whether an activity can be measured; the question is, is it profitable to measure it?

a. A commander needs to weigh the cost of installing and maintaining a work measurement program against the anticipated benefits before starting any comprehensive plan to apply this tool to all activities. Good practice is to first select those activities which can be measured quickly, with the least cost, and with the best prospects of benefit. Later, measure the more difficult areas.

b. Some of the exceptions or more difficult areas to measure are:

(1) Commanders and their staffs.

(2) Supervisors, foremen, and managers.

(3) Members of analytical and interpretive groups.

(4) Policymaking and coordinating groups.

(5) Students and trainees.

(6) Speech writers and public relations personnel.

(7) Firefighters, nurses, and doctors.

(8) Attachés and investigators.

c. Work sampling for the above groups is an excellent technique for identifying working and nonworking time for these individuals. The time spent by personnel on activities that do not support or pertain to the assigned job is lost or wasted time. Work sampling is useful in revealing this loss.

22. WORK MEASUREMENT TECHNIQUES. There are many types of work measurement techniques developed and five of the most widely used methods are explained in the following text.

a. One of the most commonly used work measurement techniques is the technical estimate. It is used to measure highly technical or irregular work. Examples of the use of the technical estimate are maintenance, rebuild, and repair of complex items such as missiles. The technical estimate is performed by breaking down the operation into its elements. An estimate is made of the time it should take to perform the operation. This is usually done by the supervisor, foreman, inspector, or analyst. Use is made of reports, standard data, and past experiences for each element. The data is recorded and evaluated. Then allowances are determined and applied to the estimate.

b. The historical technique is used to measure irregular work where a work unit may be determined. Some of the types of operations where this method can be used are administrative, indirect labor, clerical, and warehousing. The procedure is to develop and analyze records and man-hours expended, and related output of units produced. Averages and statistical methods such as median, mode, mean, quartiles, percentiles, regression, and correlation are determined. Select realistic work units and correlate input to output.

c. The predetermined time technique of work measurement is extremely accurate and inexpensive. It is used in operations which have a repetitive, short work cycle, and where the volume of production is high. The dominant characteristic is hand and body movements. Some examples are assembly, machining, packaging, packing, shipping, stock picking, and editing. To use the predetermined time technique, break the operation down into basic motions. Make a precise measurement of all variables, such as distance. Determine time variables from tables. Determine and apply allowances.

d. The time study technique may be used to measure repetitive, short cycle work performed at essentially one work station; or irregular cycle work, frequently performed by moving about several work stations. Some examples of the repetitive, short cycle operation are assembly, machining, packaging, typing, filing, editing, and packing. Examples of the irregular cycle work are janitorial, clerical, rebuild, repair, and warehousing. To apply the time study technique, conduct detailed methods study. Establish the elements which are to be timed. Measure the time with a stopwatch, or record with a camera. Establish statistical reliability by taking adequate samples. Rate the performance, then determine and apply allowances. Even though there is an irregular work cycle, there is usually a reasonable amount of standardization of method possible.

e. The work sampling technique is used in operations where there is irregular work and the work unit is closely connected to the work input. The types of operations which can use the work sampling method are clerical, rebuild, repair, warehousing, facility maintenance, and indirect labor. This technique involves the preparation of a gross description of the method of operation. The elements and the end points are defined. A random schedule is set up. Intermittent observations are made, and a tally is kept so that a production count may be obtained during the study. The performances are rated based on random sampling. The allowance is determined and applied.

The last three types of work measurement techniques discussed (predetermined time systems, time study, and work sampling) are called engineered standards.

23. DEVELOPING WORK MEASUREMENT STANDARDS. The steps in developing work measurement standards are as follows:

a. Inform your personnel. Let your people know what and why you are doing what you are doing. Enlist their cooperation and solicit their opinions.

b. Make a preliminary study. Collect job descriptions, check work flow, and interview operators and supervisors.

c. Select and define measurable work areas.

d. Improve work methods, conditions, tools, and equipment.

e. Stabilize and simplify the work methods in use.

f. Select the work units to be measured.

g. Choose a work unit which fits the work being done.

h. Select the work units for measurable work areas.

i. Design a simple and practical method for counting work units and measuring time expended.

j. Record and compile basic data.

24. SUMMARY. Coordinating and controlling are essential elements in all phases of management.

a. There are various methods of coordination: by direct personal conversation; by use of common communications media, such as letters, memorandums, telephone, and public addresses; by other forms of oral and written communications; in conferences; and by the use of committees. The chief obstacle to coordinating is the difference in personalities.

b. Controlling is the final function in the management cycle. Proper control consists of checking performance against established standards, determining the reasons for substandard performance, and taking corrective action when necessary.

c. The functions of coordinating and controlling are performed throughout all phases of management. The successful manager must smoothly relate and coordinate the activities of his organization, and establish and maintain effective controls to insure that all work is being performed in such a manner that the organizational mission will be accomplished.

d. Work simplification makes the job easier and more efficient and helps to increase morale. Work measurement is used to determine the amount of work accomplished. By enlisting the cooperation of the employees, many valuable ideas and contributions are received which make work simplification and work measurement beneficial for the employees, supervisors, and the Government.

25. CONCLUSION. As an important part of analyzing and controlling operations, the Army work simplification program and work measurement program are directed toward making work of any type easier, reducing waste, and finding simpler and better ways to do the work.

26. REFERENCES. The following references were used in the preparation of this material.

AR 1-24, Nov 58
AR 1-50, Apr 67
AR 1-65, Aug 67
DA Pam 1-11, Nov 66
DA Pam 1-50, Jan 65
DA Pam 1-51, Feb 66
DA Pam 1-52, Jun 70
DA Pam 1-54, Feb 68

Annex A (WORK MEASUREMENT SUMMARY SHEET) to Memorandum 46-6

1. Definitions.

a. Work measurement.

(1) An evaluation of work in terms of time.

(2) Measures quantity of work accomplished.

(3) Provides a time standard for work of acceptable quality.

(4) Informs management of work force effectiveness.

(5) Compares actual performance with expected performance.

b. Work area.

(1) A group of closely related work processes within a specific functional area for which man-hours are charged.

(2) The category of work for which quantitative measurement is desired; a subdivision of the organization for management control purposes.

(3) Sometimes called work or cost center.

c. Work unit. An item of work or unit of measurement selected to express quantitatively the work accomplished in a work area.

d. Performance standard. The established number of man-hours for accomplishment of a unit of work of acceptable quality. (There are three primary types of standards as shown below.)

(1) Statistical/Historical Standard. The time (man-hours) it should take an individual or group to produce a work unit based upon statistical analysis of past performance. In its simplest form this represents the time the worker has taken on the average to do the work.

(2) Technical Estimate. The time (man-hours) it should take an individual or group possessing required skills to produce a work unit at a normal pace as forecast by technically qualified individuals and based upon a detailed analysis of its components. This technique is solely dependent upon the judgment of the person making the estimate.

(3) Engineered Standard. The time (man-hours) it should take a trained worker, or a group of trained workers, working at a normal pace to produce a prescribed unit of work of acceptable quality according to a specified method under specific working conditions. Engineered standards usually are determined by one of the following techniques:

(a) Direct time study.

(b) Predetermined time systems.

(c) Work sampling.

e. Standard man-hours. Computed man-hours within which a given number of work units can be produced based on an established standard (the number of work units produced times the standard equals standard man-hours).

f. Performance effectiveness. The ratio obtained by dividing the number of standard man-hours by the actual man-hours consumed and multiplied by 100 to obtain a percentage. (Normal range 80-120 percent.)

g. Rating (leveling). Involves comparing the performance or effective effort of the worker to the effort exerted at normal pace (100 percent). This involves the application of a numerical factor to indicate at what proportion of the normal pace a worker is working, that is, 110 percent, 80 percent, etc., of normal pace. Synonymous terms are effort rating, pace rating, leveling, performance rating, and speed rating.

h. Allowances. A time increment added to the normal work time (basic time), for production loss due to fatigue, personal time, and unavoidable delays.

2. Criteria.

a. Cost in time, money, and effort to develop.

b. Effectiveness in increasing economy.

c. Develop methods of control and provide data for planning purposes.

3. Uses.

a. Manpower utilization.

b. Budgeting.

c. Performance appraisal (not discipline).

CHECKLIST GUIDE TO IMPROVE PERFORMANCE

POSSIBLE REASONS FOR LOW OR HIGH PERFORMANCE EFFECTIVENESS	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS LOW	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS HIGH
Staffing.	Can be personnel in excess of workload. Shift personnel to a function which has backlog--if condition is temporary; put personnel on leave; if condition is part of downward workload trend; reduce personnel staffing.	Are there unfilled vacancies causing remainder of personnel to work at an excessive speed? Are employees using an abnormally high amount of annual leave in view of workload? Is workload increasing more rapidly than personnel staffing?
Deviation from standard policies, practices and procedures.	Compare the processing time element with the standard; enforce adherence to established procedures.	Is there any "illegal" shortcutting? Have you improved a policy or procedure without the proper followup? Can this improvement be applied throughout the command? Has there been an award paid?
Quality of Work	Is the quality in excess of standard? Wht has it been raised? Adjust to meet the established specificiations. Are errors requiring corrective action high? Keep account of errors by individual and the impact on production until situation is resolved. Consider training program.	Check quality being processed. Is it below that called for by standard? Why?

POSSIBLE REASONS FOR LOW OR HIGH PERFORMANCE EFFECTIVENESS	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS LOW	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS HIGH
Improper Scheduling	Reschedule work or shift personnel assignments to balance personnel with workload. Eliminate bottlenecks.	Is one operation or account showing high effectiveness because of poor scheduling? Reschedule and balance personnel with workload.
Performance in previous function is faulty	Could be poor scheduling, many errors requiring correction, etc. Correct to obtain smooth, accurate workflow. Is supervisor in previous function aware of situation? Has he taken steps to correct condition and prevent recurrence?	See paragraph above.
Equipment	Determine machine and personnel balance; establish machine preventive maintenance program; develop and maintain equipment history record to reflect number and types of breakdowns, cost, etc; where maintenance costs are high, consider replacement.	Has new equipment been installed or is old equipment being used more efficiently? Does this change the time required to process? Restudy and adjust standard.
Supplies	Has flow of supplies been faulty, impeding timely work completion? Are supplies inferior? Take corrective action.	Are new or different supplies expediting work?
Layout	Has the layout been changed? Has this increased the processing time? How? Correct layout to obtain straight-line flow, eliminating backtracking or circuitous routing.	Has the layout been changed? Has processing time been reduced?

POSSIBLE REASONS FOR LOW OR HIGH PERFORMANCE EFFECTIVENESS	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS LOW	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS HIGH
Low Individual Productivity	Is it due to new and inexperienced personnel? Take a work count to determine distribution of work and individual productivity. If training is indicated, take necessary action.	Has a turnover in personnel left you with highly skilled individuals? Are these skills being properly utilized? Find the proper job and pay category for these individuals.
Leave	Has the annual leave rate been low? Has the annual leave or sick leave been high, with too many key personnel being out at the same time?	Has the annual or sick leave been high, so that a few are doing the entire work? Has annual leave been low causing a production rate higher than the standard? If so, check sick leave and/or schedule annual leave.
Supervision	Supervisor is not "managing" the organization by resolving problems expeditiously; reporting troublesome areas to his supervisor; being aware of and correcting any of items discussed herein. Consider supervisory training program.	Are supervisors using a better technique to accomplish the workload more quickly? Is there any operation in the chain being missed.
Work Units and Standards	Has the composition of the work unit changed so that more time is required to accomplish a work unit? If the condition is temporary, so explain. If permanent, advise Management Engineering Division to adjust standard. Is the standard too tight? Why? Can you factually support your contention? If so, consult Management Engineering Division to adjust standard. Is the	Has the composition of the work unit changed so that less time is required to accomplish a work unit? Is the standard too loose? Check the account definition and work unit definition.

POSSIBLE REASONS FOR LOW OR HIGH PERFORMANCE EFFECTIVENESS	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS LOW	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS HIGH
Work Units and Standards (continued)	standard too tight? Why? Can you factually support your contention? If so, consult Management Engineering Division. Do work units adequately describe the work? If not, suggest better work unit. Should count be made at a different time? When?	
Reporting of manhours expended and work units accomplished.	Verifying reporting. Do personnel understand the composition of the work unit? Do they understand and properly take credit for the count? Consult Cost Accounting Branch on discrepancies. Consider training program.	Verify reporting. Do personnel understand the composition of the work unit? Do they understand and properly take credit for the count? Consult Cost Accounting Branch on discrepancies. Consider training program.
Organization Structure	Has this been officially changed so that it increases manhour costs? Has an informal organization change taken place?	Has this been changed in such a way that manhour costs are reduced? Is this change official? Check the organizational manual and recommend changes.
Reports	Have reporting requirements increased to the extent that less work units can be accomplished per manhour? Has the design of existing reports been changed so that a significant adverse effect on workload is being experienced?	Have reporting requirements decreased to the extent that more work units can be accomplished per manhour? Has the design of existing reports been changed? Are all reports required being accomplished?

POSSIBLE REASONS FOR LOW OR HIGH PERFORMANCE EFFECTIVENESS	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS LOW	CHECK OR ACTION RECOMMENDED WHEN PERFORMANCE EFFECTIVENESS IS HIGH
Forms	Have forms been added? Do they serve a useful purpose? Does it effect production? Can it be eliminated, simplified, or combined with another form? Do they duplicate existing information? Has the forms design been changed?	Have forms been eliminated? Does this reduce the time to process a work unit?

NOTE: In all cases of high performance effectiveness examine reasons closely to determine if an individual or group award should be given. In those cases where changes in method have been affected, examine to see if there is Army-wide application.

Annex C (REVIEW EXERCISE) to Memorandum 46-6

Situation. You are the supervisor of a small reproduction unit of an administrative office. Your personnel and equipment resources consist of two mimeograph-machine operators and the equipment and work site shown on the layout chart in this exercise. Based on personal observation, you believe that the operators spend too much time away from the machines and walk unnecessarily great distances in performing their duties. You decide to make improvements, but first you must prepare a flow process chart covering the actions presently performed by Mimeograph-Machine Operator Number 2 in completing a work order. The following facts and procedures are known:

The process starts and ends at Mimeograph Machine Number 2.

Operator Number 2 starts at his machine, picks up the work order and stencil from your desk, and returns to his machine.

He then proceeds to the supply cabinet, collects necessary mimeograph paper, and returns to his machine.

He puts the paper in the feed tray of the machine, puts stencil on the roller of the machine, and runs the order.

He collects completed work from the tray, takes completed copies along with copy of work order to the table, and then returns to the machine

He removes the stencil, places it on paper backing, and files the stencil in File Cabinet Number 1.

He returns to the machine and cleans it for the next job.

1. FIRST REQUIREMENT. On one of the attached DA Forms 684, prepare a flow process chart to show the actions now followed by Mimeograph-Machine Operator Number 2 in completing a work order.

Situation (Continued). Now that you have prepared a flow process chart of present operations by Operator Number 2, your next step is to study this chart to see how you can improve the procedures. Based on your study of the present operations, you decide that the work area shown on the present layout chart is poorly arranged and that correction of errors in this arrangement will be your only important management improvement for the time being.

2. SECOND REQUIREMENT. On the attached blank layout form, prepare a new office layout. Locate the equipment and furniture so that Operator Number 2 can perform his work more efficiently. In your layout, try to achieve what seems to you to be the best economy in the distance Operator Number 2 has to travel in performing his job.

Situation (Continued). After you have studied and tried out your new office layout (second requirement), you come to the conclusion that it is an improvement in manpower efficiency. However, you are not sure of the exact extent of the improvement, and you decide to depict the new layout and operations on another flow process chart and compare the new with the old.

3. THIRD REQUIREMENT. Prepare a flow process chart of the reproduction unit's operations based on the new layout. Again, trace only the actions of Operator Number 2.

FLOW PROCESS CHART
(DA Pamphlet 20-300)

NUMBER | PAGE NO. | NO. OF PAGES

PROCESS

☐ MAN OR ☐ MATERIAL

CHART BEGINS

CHART ENDS

CHARTED BY

DATE

ORGANIZATION

ACTIONS	SUMMARY PRESENT		PROPOSED		DIFFERENCE	
	NO.	TIME	NO.	TIME	NO.	TIME
○ OPERATIONS						
⇨ TRANSPORTATIONS						
□ INSPECTIONS						
D DELAYS						
▽ STORAGES						
DISTANCE TRAVELLED (Feet)						

DETAILS OF ☐ PRESENT ☐ PROPOSED METHOD	OPERATION TRANSPORTATION INSPECTION DELAY STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	NOTES	ANALYSIS CHNGE ELIMINATE	COMBINE	SEQUENCE	PLACE	PERSON	IMPROVE
1	○⇨□D▽															
2	○⇨□D▽															
3	○⇨□D▽															
4	○⇨□D▽															
5	○⇨□D▽															
6	○⇨□D▽															
7	○⇨□D▽															
8	○⇨□D▽															
9	○⇨□D▽															
10	○⇨□D▽															
11	○⇨□D▽															
12	○⇨□D▽															
13	○⇨□D▽															
14	○⇨□D▽															
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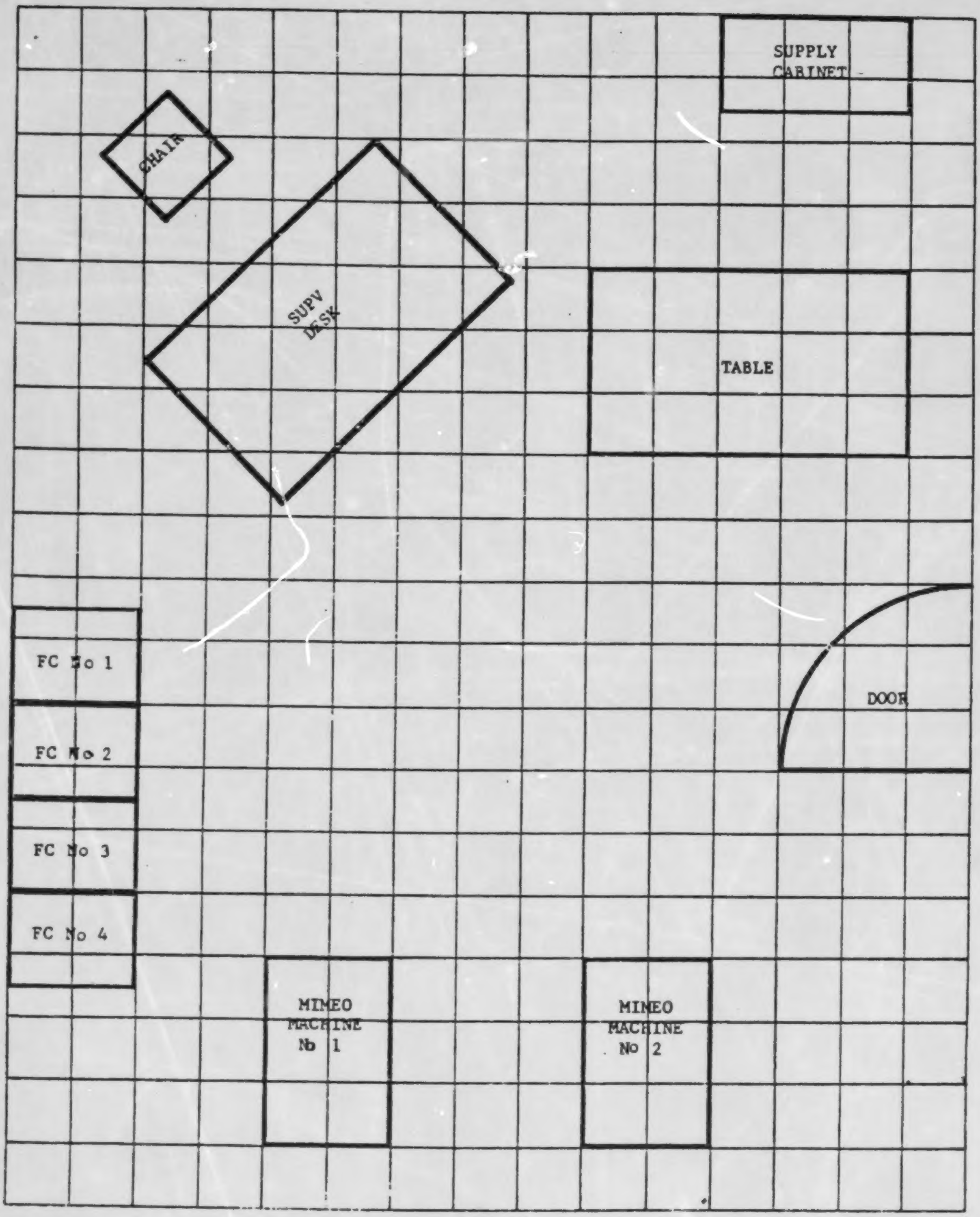
19	○⇨□D▽															
20	○⇨□D▽															
21	○⇨□D▽															

DA FORM 1 MAY 51 684 (Formerly DA AGO) REPLACES OCS FORM 391, 1 FEB 1951, WHICH MAY BE USED.


SUPPLY CABINET
CHAIR
SUPV DESK
TABLE
DOOR
FC No 1
FC No 2
FC No 3
FC No 4
MIMEO MACHINE No 1
MIMEO MACHINE No 2

FLOW PROCESS CHART
(DA Pamphlet 20-300)

NUMBER

PAGE NO.

NO. OF PAGES

PROCESS

☐ MAN OR ☐ MATERIAL

CHART BEGINS

CHART ENDS

CHARTED BY

DATE

ORGANIZATION

SUMMARY

ACTIONS	PRESENT NO.	PRESENT TIME	PROPOSED NO.	PROPOSED TIME	DIFFERENCE NO.	DIFFERENCE TIME
○ OPERATIONS						
⇨ TRANSPORTATIONS						
□ INSPECTIONS						
D DELAYS						
▽ STORAGES						
DISTANCE TRAVELLED (Feet)						

DETAILS OF ☐ PRESENT ☐ PROPOSED METHOD	OPERATION TRANSPORTATION INSPECTION DELAY STORAGE	DISTANCE IN FEET	QUANTITY	TIME	ANALYSIS WHY? WHAT?	WHERE?	WHEN?	WHO?	HOW?	NOTES	ANALYSIS CHNGE ELIMINATE	COMBINE	SEQUENCE	PLACE	PERSON	IMPROVE
1	○⇨□D▽															
2	○⇨□D▽															
3	○⇨□D▽															
4	○⇨□D▽															
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DA FORM 1 MAY 52 **684** *(Formerly DA AGO)* REPLACES OCS FORM 391, 1 FEB 1951, WHICH MAY BE USED.

1. Procedure for Conducting a Work Sampling Study.

a. Determine the purpose of the study. Prior to planning the details and actually conducting a work sampling study, it is important that careful consideration be given to the purpose of the study or the use that will be made of the information derived from the study. With work sampling, it is relatively easy to establish a subjective relationship between the accuracy needed in the data to be provided by the study and the potential value or benefit to be derived from the data. Since accuracy is mathematically related to the number of observations, cost can be controlled by stating the accuracy requirements desired after considering the potential use of the data provided. A typical accuracy requirement for a work sampling study, would range from a plus or minus 3 percent to a plus or minus 5 percent at a confidence level of 95 percent. (An example of a sample size chart based on a confidence level of 95 percent is on page 50.)

b. Obtain cooperation of the supervisor. The second step in the study is to obtain the cooperation of the supervisor of the area in which the study is to be conducted. Even though he may be the one who requested assistance to solve a methods problem, it is important that he be apprised of your plans to use the work sampling technique. Therefore, a careful explanation of the theory, concepts, purpose, application, and results to be expected from such a study is necessary.

c. Select categories for observation. This step involves an evaluation of the work performed in the work area to be studied. Subsequent to this, the activities of the area must be subdivided into categories or tasks, which collectively represent every function that is performed. The categories selected are a direct function of the purpose or objective of the study.

d. Design the study.

(1) Determine the length of the study. In many work areas, certain cyclic patterns can be observed. Thus, to gain valid results from work sampling, at least a complete cycle must be included in the study. If the area to be observed does not have a work cycle, it is desirable that the study continue for a period of at least 1 week.

(2) Determine the number of observations required. The number of observations that are needed for the study can be determined by use of the sample size chart on page 50. To use this chart, an estimate of the percentage of occurrence P (%) for each of the categories to be used in the study is required plus a statement of accuracy requirements (as discussed in paragraph a above). If we use an example of the Engineer, with the category "Clerical jobs," with an estimated percentage occurrence of 20 percent and accuracy requirements of plus or minus 5 percent, the table will show that 256 observations are required. Each category

in the study must be checked, since the number of observations required for the study is determined by the category requiring the largest number of observations.

(3) The number of observation trips required each day of the study is determined by:

$$\text{Trips/day} = \frac{\text{observations required}}{\text{(study days) (observations/trip)}}$$

(4) A preliminary work sampling is usually made to determine the percentage of time spent in the various categories and to suggest necessary refinements in categories. Usually 3 days is sufficient for a preliminary sampling.

(5) Select random times of observation. Since observations must be made on a random basis, the analyst must pick his times for making observation of the activity on a random basis. There are two acceptable methods for doing this. The use of random number tables or drawing times of observation from a hat containing slips of paper that cover each minute of the day. Whatever procedure is used, it is essential that the time ultimately selected will allow opportunity for observation of the activity under study without any bias on the part of the observer.

(6) Design study forms. This is usually best accomplished by custom designing a suitable format for local requirements. The form used for making observations should be kept as simple as possible. Data summary sheets may also be designed for use in summarizing the data collected on the observation forms.

e. Conduct the study.

(1) Make observations. At the specified times, the analyst should walk to a preselected point and observe the worker. The analyst classifies the activity of the worker, at the instant of observation, into one of the predefined categories on his work sampling observation sheet. Each worker is observed each trip and is counted as one observation. Each worker should be pace rated at least 25 percent of the observations.

(2) Calculations. The percentage occurrence P(%) for each day of each category is determined by dividing the number of observations of the category by the total number of observations for the day. For example; if a category, "Perform Clerical Work," was observed 10 times a day in which 100 observations were made, the P(%) value would be: 10/100 or .10(10 percent). The same relationship is used on a cumulative basis at the end of the study.

f. Evaluate and summarize the results.

(1) The final step in conducting a work sampling study is to compile all the data collected into a meaningful format. This final summarization, plus analysis of the data collected, must be done in view of the original or revised objective of the study.

(2) Stand time/unit = $\frac{\text{working man-hours X pace X allowance factor}}{\text{work units}}$

(3) Example:

Category	No. of Observations	Pace rate
Time Stamping	500	.75
Recording the Order	300	.90
Filing the Order	400	.80
Routing the Order	400	1.00
Unavoidable Delay	100	---
Idle	300	---
total observations---	2000	

(a) Compute available hours (covered by sampling period)

5 workers X 3 weeks X 40 hrs/wk = 600 man-hours
3 workers X 1 week X 40 hrs/wk = 120 man-hours
720 man-hours

(b) Compute working man-hours X pace.

Category	P(%)	Avail Time	Working Man/hrs.	Pace Rate	Working Man-hours X Pace
Time Stamping	25	720	180	.75	135.0
Recording the Order	15	720	108	.90	97.2
Filing	20	720	144	.80	115.2
Routing	20	720	144	1.00	144.0
				total	451.4

(c) Compute allowance factor (allowances = 50 min/day)

$$= 1 + \frac{\text{min/day}}{480 - \text{min/day}}$$

$$= 1 + \frac{50}{430} = 1.12$$

(d) Compute standard time/unit

$$\text{Standard time/unit} = \frac{\text{working man-hours X pace X allowance factor}}{\text{number of units produced}}$$

$$= \frac{491.4 \text{ X } 1.12}{1.000} \qquad = .550 \text{ hrs/unit}$$

(e) Compute manpower requirements

$$= \frac{\text{average work units per day X standard X } 1.11}{8 \text{ (standard hours per day)}}$$

$$= \frac{50 \text{ X } .55 \text{ X } 1.11}{8} \qquad = 3.8 \qquad = 4.0$$

2. Computation and Use of Percent of Effectiveness.

a. Percent of effectiveness. Percent of effectiveness is computed to show how the actual amount of work accomplished compares with the established standard of performance. This computation highlights work areas where additional managerial effort is required or where outstanding performance may be identified. Percent of effectiveness is used also to adjust personnel requirements, schedules of work, and budgets when they are based upon work measurement standards. If the number of productive man-hours actually used is greater than the number established by the standard, the effectiveness is below 100 percent. If the converse is true, the effectiveness is about 100 percent. To compute percent of effectiveness, we must first arrive at the number of standard man-hours, or the hours which should have been utilized with a given workload and standard of measurement, and the number of man-hours actually expended in the accomplishment of this workload.

b. Range of acceptable performance. In analyzing performance, the common practice is to focus attention first upon those work areas where percent of effectiveness is less than 80; next, in the areas where percent effectiveness is more than 120; and last, in areas where percent effectiveness is between 80 and 120. However, this common practice should not influence commanders and supervisors to ignore completely those work areas in which the percent effectiveness is between 80 and 120, as a sharp rise or fall in the percent effectiveness in a work area might highlight an incipient problem which deserves command attention.

c. A percent effectiveness of less than 80 or more than 120 ordinarily is an indication that a study should be made to determine the causes. Incomplete planning, poor scheduling, inadequate supplies of material, or improper tools may be contributing to poor performance. Performances may be exceptionally high because of inadequate staffing, rush orders, or peakloads for which exceptional effort is required to complete projects. In either case, management should determine the cause so that the conditions can be corrected as soon as possible. Last, work areas or work units may need clarification, performance data may be incorrectly reported, the time standard may need adjustment, or other factors may be responsible for the apparent unusual percent effectiveness. Repeated performance above or below the acceptable range indicates the need for a survey of the operations, including study of procedures, work flow, layout, and manpower utilization.

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SAMPLE SIZE TABLE

Sample Size Required for p values, 95% Confidence Limits

% Occurrence = Estimated or observed frequency of category or element
% Acceptable error = Acceptable deviation from true percentage.

% Occurrence (in Decimal)	% Acceptable Error Expressed in Decimals ± .01	± .02	± .03	± .04	± .05
.01/.99	396	99	44	25	16
.02/.98	784	196	87	49	31
.03/.97	1164	291	129	73	47
.04/.96	1536	384	171	96	61
.05/.95	1900	475	211	119	76
.06/.94	2256	564	251	141	90
.07/.93	2604	651	289	163	104
.08/.92	2944	736	327	184	118
.09/.91	3276	819	364	205	131
.10/.90	3600	900	400	225	144
.11/.89	3916	979	435	245	157
.12/.88	4224	1056	469	264	169
.13/.87	4524	1131	503	283	181
.14/.86	4816	1204	535	301	193
.15/.85	5100	1275	567	319	204
.16/.84	5376	1344	597	336	215
.17/.83	5644	1411	627	353	226
.18/.82	5904	1476	656	369	236
.19/.81	6156	1539	684	385	246
.20/.80	6400	1600	711	400	256
.21/.79	6636	1659	737	415	265
.22/.78	6864	1716	763	429	275
.23/.77	7084	1771	787	443	283
.24/.76	7296	1824	811	456	292
.25/.75	7500	1875	833	469	300
.26/.74	7696	1924	855	481	308
.27/.73	7884	1971	876	493	315
.28/.72	8064	2016	896	504	323
.29/.71	8236	2059	915	515	329
.30/.70	8400	2100	933	525	336
.31/.69	8556	2139	951	535	342
.32/.68	8704	2176	967	544	348
.33/.67	8844	2211	983	553	354
.34/.66	8976	2244	997	561	359
.35/.65	9100	2275	1011	569	364
.36/.64	9216	2304	1024	576	369
.37/.63	9324	2331	1036	583	373
.38/.62	9424	2356	1047	589	379
.39/.61	9516	2379	1057	595	381
.40/.60	9600	2400	1067	600	384
.41/.59	9676	2419	1075	605	387
.42/.58	9744	2436	1083	609	390
.43/.57	9804	2451	1089	613	392
.44/.56	9856	2464	1095	616	394
.45/.55	9900	2475	1100	619	396
.46/.54	9936	2484	1104	621	397
.47/.53	9964	2491	1107	623	399
.48/.52	9984	2496	1109	624	399
.49/.51	9996	2499	1111	625	400
.50	10000	2500	1111	625	400

Annex E (OPTIONAL PRACTICAL EXERCISE 1) to Memorandum 46-6

1. Situation. You are the manpower control officer, Camp Jones, GA. You are developing a standard for the processing of supply orders, using the technique of work sampling. The work unit is orders received. Using the information and formula below, complete the two requirements of this PE.

a. The category with the highest occurrence is estimated to be at 25 percent and accuracy requirements of plus or minus 4 percent. (See Sample Size Table on page 50.)

b. There are 240 hours covered by the sampling period. (2 workers, 3 weeks, at 40 hours per week.)

c. The allowance factor is 1.12.

d. Work units in the sampling period are 500.

e. The work sampling summary sheet (p. 52)gives data concerning the number of observations and average leveling (rating factor).

f. Level factor. Estimated rate of operators by observers:

Time Stamping --	.75
Recording Orders --	.90
Filing --	.85
Routing --	1.00

g. Formula:

$$P\ (\%) = \frac{\text{Month observations (time stamping)}}{\text{total number of observations}} = \frac{150}{600} = .25 = 25 \text{ percent}$$

Avail. Time = 240, given in para b above.

Prod. Time = P (%) X Available Time or .25 X 240 = 60

Level Factor = This is the rate or speed at which operators are working. This is estimated by observers.

Leveled Prod.Time = Prod. Time X Level Factor or 60 X .75 = 45

WORK SAMPLING SUMMARY SHEET

STUDY TITLE: Supply Orders

DATES: April 6 to April 24

CATEGORY	DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total N	P(%)	PACE LEVEL FACTOR
															37				
	N	36	36	36	41	43	37	43	43	40	40	40	45	38	37	45	600		
1. Time stamping	OB	10	12	11	9	9	8	10	11	8	12	12	10	9	8	11	150	▨	.75
	P																▨		
2. Recording order	OB	6	6	6	7	7	4	5	5	6	7	8	6	6	4	7	90	▨	.90
	P																▨		
3. Filing the order	OB	8	7	7	7	8	8	9	10	8	5	6	8	9	9		120	▨	.85
	P																▨		
4. Routing the order	OB	7	7	7	8	8	9	10	7	8	8	7	7	9	9	9	120	▨	1.00
	P																▨		
5. Unavoidable delay	OB	-	-	2	4	4	-	-	4	4	2	-	6	-	2	2	30	▨	
	P																▨		
6. Idle	OB	5	4	3	6	7	8	9	6	6	6	7	8	5	5	5	90	▨	
	P																▨		
7.	OB																	▨	
	P																▨		
8.	OB																	▨	
	P																▨		
9.	OB																	▨	
	P																▨		
10.	OB																	▨	
	P																▨		
11.	OB																	▨	
	P																▨		
12.	OB																	▨	
	P																▨		
13.	OB																	▨	
	P																▨		
TOTAL OBSERVATIONS																			

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M46-6

FIRST REQUIREMENT: Complete the following table.

CATEGORY	P(%)	AVAIL. TIME	PROD. TIME	LEVEL FACTOR	LEVELED PROD. TIME
Time stamping	25	240	60	.75	45
Recording orders				.90	
Filing				.85	
Routing				1.00	

SECOND REQUIREMENT:

a. Calculate the allowance factor. ________________________
The workers' average daily nonproductive work is 20 minutes for break, 15 minutes for personal needs, 10 minutes idleness, and 5 minutes for equipment repair.

$$1 + \frac{\text{min/day}}{480-\text{min/day}}$$ (min/day is average daily nonproductive work total)

60 minutes x 8 hours = 480 minutes

b. What is the accurate number of observations that would have been required for the study? ________________________
Refer to page 50, line .25/.75 -- go over to column ± .04 (4 percent)

c. Compute standard time per unit. ________________________

Standard time/unit = total leveled productive time x allowance factor ÷ total number of units produced.

d. With a projected average monthly workload of 840 for the coming year and based on a 40-hour week, what are the manpower requirements? (NOTE: There is a leave factor of 11 percent). Assume a 4-week month.

$$\begin{array}{rl} 1.00 & \\ +.11 & \\ \hline 1.11 & \text{leave factor} \end{array} \qquad \begin{array}{rl} 40 & \text{hours per week} \\ \text{x}4 & \text{week} \\ \hline 160 & \text{hours} \end{array}$$

Manpower requirements = workload x standard time/unit x leave factor ÷ hours = ________________________

Annex F (SOLUTION TO PE 1) to Memorandum 46-6

1. Solution to first requirement.

CATEGORY	P (%)	AVAIL. TIME	PROD. TIME	LEVEL FACTOR	LEVELED PROD.TIME
Time stamping	25	240	60	.75	45
Recording orders	15	240	36	.90	32.4
Filing	20	240	48	.85	40.8
Routing	20	240	48	1.00	48
				TOTAL	166.2

2. Solution to second requirement.

a. Allowance factor is 1.12

Nonproductive time = 20

$$\begin{array}{r} 20 \\ 15 \\ 10 \\ 5 \\ \hline 50 \end{array} \text{ min/day}$$

$$1 + \frac{\text{min/day}}{480 - \text{min/day}} \qquad 1 + \frac{50}{480 - 50}$$

$$1 + \frac{50}{430} \qquad 1 + .116 = 1.12$$

b. Observations: .469 (See table p. 50)

c. Standard time per unit is .3722

$$\frac{166.2 \times 1.12}{500} = .3722$$

d. Manpower requirement is 2.

$$\frac{840 \times .3722 \times 1.11}{160} = 2.169 = 2$$

Annex G (OPTIONAL PRACTICAL EXERCISE 2) to Memorandum 46-6

INSTALLATION PERFORMANCE STANDARD

FIRST REQUIREMENT: Determine the performance standard for an installation work area using the following monthly data. The formula used to figure this is:

Productive man-hours ÷ work units produced = performance ratio

MONTH	WORK UNITS PRODUCED	PRODUCTIVE MAN-HOURS	PERFORMANCE RATIO
January	9,706	6,675	
February	9,152	6,632	
March	9,247	6,944	
April	7,961	6,194	
May	8,994	7,165	
June	8,158	6,586	
July	7,924	6,582	
August	7,490	6,266	
September	7,781	6,730	
October	7,377	6,408	
November	7,869	7,011	
December	6,873	6,244	

SECOND REQUIREMENT: Add the high 6 months figures of work units produced and add the figures for corresponding months of productive man-hours; then figure the ratio for this high 6 months.

Annex H (SOLUTION TO PE 2) to Memorandum 46-6

INSTALLATION PERFORMANCE STANDARD

WORK UNITS PRODUCED		PRODUCTIVE MAN-HOURS		PERFORMANCE RATIO	
9,706		6,675		.688	
9,152		6,632		.725	
9,247		6,944		.751	
7,961		6,194		.778	
8,994		7,165		.797	
8,158	53,218	6,586	40,196	.807	.755
7,924		6,582		.831	
7,490		6,266		.837	
7,781		6,730		.865	
7,377		6,408		.869	
7,869		7,011		.891	
6,873		6,244		.908	

Annex I (OPTIONAL PRACTICAL EXERCISE 3) to Memorandum 46-6

COMPUTATION OF PERCENTAGE OF EFFECTIVENESS

COLUMN 1 Performance Standard	COLUMN 2 Workload	COLUMN 3 Standard Man-Hours	COLUMN 4 Actual Man-Hours	COLUMN 5 Percentage Effectiveness
.125	27,500	3,437.50	3,600	
1.70	3,750	6,375.00	7,900	
18.1	250	4,525.00	4,400	
.013	35,450	460.85	400	
.250	1,850	462.50	500	
.075	28,460	2,134.50	2,200	

REQUIREMENTS: Compute Percentage of Effectiveness.

Formula: Column 1 X Column 2 = Column 3 ÷ Column 4 = Column 5

Annex J (SOLUTION TO PRACTICAL EXERCISE 3) to Memorandum 46-6

COMPUTATION OF PERCENTAGE OF EFFECTIVENESS

COLUMN 1 Performance Standard	COLUMN 2 Workload	COLUMN 3 Standard Man-Hours	COLUMN 4 Actual Man-Hours	COLUMN 5 Percentage Effectiveness
.125	27,500	3,437.50	3,600	95.49
1.70	3,750	6,375.00	7,900	80.70
18.1	250	4,525.00	4,400	102.84
.013	35,450	460.85	400	115.21
.250	1,850	462.50	500	92.50
.075	28,460	2,134.50	2,200	97.02

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MODIFICATIONS

Pages 59-60 of this publication has (have) been deleted in adapting this material for inclusion in the "Trial Implementation of a Model System to Provide Military Curriculum Materials for Use in Vocational and Technical Education." Deleted material involves extensive use of military forms, procedures, systems, etc. and was not considered appropriate for use in vocational and technical education.

Edition code-1

EXERCISE BOOKLET

ARMY CORRESPONDENCE COURSE

SUBCOURSE

QM 191-2

FUNDAMENTALS OF MANAGEMENT

Study Material:	Memorandum 46-1 (Aug 71)
	46-2 (Aug 71)
	46-3 (Aug 71)
	46-4 (Aug 71)
	46-5 (Aug 71)
	46-6 (Aug 71)

NOTICE!!
LESSON SOLUTIONS
ARE NOW
ATTACHED AT
THE BACK OF
THIS BOOKLET.

ATTENTION

COMPLETE THIS SUBCOURSE AS SOON AS POSSIBLE.

All lessons and the examination must be received for grading not later than 12 months after date subcourse was begun, as shown on your answer cards.

Prepared by
United States Army Adjutant General School
Fort Benjamin Harrison
Indiana 46216

Approved by CG, CONARC, Jun 60

Edition date: Aug 71

ATTENTION

Please check study material you received against listing on the cover of this booklet. If a discrepancy exists, notify the Director, DNRI, U.S. Army Adjutant General School, Indianapolis, Ind. 46249.

STUDENTS OF THE UNITED STATES ARMY ADJUTANT GENERAL SCHOOL: USE PUNCHED ANSWER CARDS. YOUR SUBCOURSE EXERCISES AND EXAMINATION WILL BE MACHINE GRADED. DO NOT BEND OR MUTILATE YOUR ANSWER CARDS.

STUDENTS OF OTHER SCHOOLS: USE ANSWER SHEETS OR CARDS PROVIDED BY YOUR SCHOOL.

HOW TO USE PUNCHED ANSWER CARDS

(For detailed instructions, see the instruction booklet sent to you with your punched card stylus and sponge.)

1. Check your SOCIAL SECURITY NUMBER, ENROLLMENT NUMBER or GROUP ENROLLMENT NUMBER, and the SUBCOURSE NUMBER entered on the card.
2. Place the card on a hard surface. Using a soft lead pencil, circle the lesson number. Then circle your ONE answer to each question. If you make an error, "X" it out and circle your new choice. DO NOT ERASE.
3. Place the card on the sponge furnished you. Using the stylus, punch out the LESSON NUMBER you have circled. Then punch out your circled ANSWER for each question. (In answering true and false questions, punch out "A" for true or "B" for false.)
4. Check to make sure that you have punched ONLY ONE answer for each question. If you have punched more than one answer per question, you must make a new card. Brush all the chips free from the punched card.
5. Place your ADDRESS on the back of the card. Mail the card in the envelope provided.

REMEMBER

TAN-colored cards are LESSON cards
BLUE-striped cards are EXAM cards
ORANGE-striped cards are SECOND TRY cards

SUBCOURSE 46--FUNDAMENTALS OF MANAGEMENT

INTRODUCTION

Men, destructive force, weapons, inventiveness, energy, keenness, flexibility--these are the essence of military power. How do the responsible persons use and control millions of men, masses of materiel, and billions of dollars? How do they employ this power, energy, and keenness? These questions can be answered in terms of tactics, strategy, and leadership; but an all-inclusive word is "management."

The responsibility for the most efficient use of American resources is one of the most sobering factors in military life today. Each new scientific development, each satellite launched into space, emphasizes the need for skill, intelligence, and ingenuity in those who decide how to employ our resources.

The need in our Armed Forces is not only for those who can inspire men to battle but also for those who can plan and direct supporting operations. Military management is not limited to commanders at top echelons; it must be understood and applied at all levels of command, and every officer and supervisor has management responsibilities.

This subcourse is not intended to make you a management expert. It is designed to give you an understanding of the fundamentals of management. We hope that when you complete the course you will apply what you have learned and will go on to advanced study in the field.

Twelve credit hours are allowed for this subcourse. It consists of six lessons and an examination, as follows:

	Memorandum
Lesson 1--Introduction to Management (1 hr)	46-1
Lesson 2--Principles and Policies of Management (1 hr)	46-2
Lesson 3--The Function of Planning (1 hr)	46-3
Lesson 4--The Function of Organizing (3 hrs)	46-4
Lesson 5--The Function of Directing (1 hr)	46-5
Lesson 6--The Functions of Coordinating and Controlling (3 hrs)	46-6
Examination (2 hrs)	

Texts furnished: The memorandums included for the lesson assignments are the only texts required for the completion of this subcourse. They are based on regulations referenced in the appropriate memorandums. They reflect the current thought of this School and conform as closely as possible to Department of the Army doctrine as of August 1971. Development and progress make such doctrine continuously subject to change.

Optional practical exercises are included at the end of each memorandum. Students are encouraged to participate, utilizing the information furnished in the text. Do NOT mail your solutions in for grading.

The instructional material furnished you is essentially the same as that furnished to instructors and students of the U.S. Army Adjutant General School.

Be sure that you understand the requirements of each lesson assignment. Study the text material for each lesson and complete the exercise requirements. When you are satisfied that your solutions are correct, prepare your answers exactly as instructed.

LESSON 1--Introduction to Management

Credit hours: 1
Questions: 20

TEXT ASSIGNMENT: Memorandum 46-1--Introduction to Management.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain the overall objective of management.
2. Explain the difference between personal leadership and management leadership.
3. List and give a brief explanation of the functions of management.

REQUIREMENT: Answer the following 20 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. What is the first process in the management cycle?

   a. Allocating resources.
   b. Assigning responsibilities.
   c. Determining priorities.
   d. Planning a line of action.

2. Which of the following is considered an indispensable aid to directing?

   a. Highly skilled personnel.
   b. Adequate manpower.
   c. Clear communications.
   d. A formal organization.

3. What are the functions of management?

   a. Forecasting and policymaking.
   b. Planning, organizing, directing, coordinating, and controlling.
   c. Initiating, sorting, filing, reporting, and correcting.
   d. Organizing and commanding.

4. You have been appointed chairman of a planning committee and have been told to select the other members. Which of the following should you choose?

   a. Persons of equal grade level.
   b. Both military and civilian personnel.
   c. Persons who will be most directly affected by the proposed operation.
   d. Persons who will not be directly affected by the proposed operation.

5. What is the overall objective of management?

   a. Economical production.
   b. Attainment of a definite goal.
   c. Technological advancement.
   d. Conservation of money and materials.

6. Lieutenant Beaver, personnel officer at Fort Harmony, has been assigned the job of starting a training program for clerical personnel. In which of the following actions is the function of directing BEST illustrated?

   a. He writes and distributes to instructors the program of instruction, the master schedule, and the weekly schedules.
   b. A few days after the start of the program he discovers that one of the instructors is not following his schedule. He talks to the instructor, explains why the schedule must be followed, and tells him to conduct future classes in accordance with it.
   c. He selects instructors and administrative personnel and assigns duties to them.
   d. He calls in three of his subordinate supervisors, explains the project, and asks them to submit recommendations concerning the curriculum.

7. Referring to question 6, which of the following actions BEST illustrates the function of organizing?

   a. He writes and distributes to instructors the program of instruction, the master schedule, and the weekly schedules.
   b. A few days after the start of the program he discovers that one of the instructors is not following his schedule. He talks to the instructor, explains why the schedule must be followed, and tells him to conduct future classes in accordance with it.
   c. He selects instructors and administrative personnel and assigns duties to them.
   d. He calls in three of his subordinate supervisors, explains the project, and asks them to submit recommendations concerning the curriculum.

8. Which of the following terms might be defined as "a premise based on known circumstances"?

   a. Principle.　　c. Fact.
   b. Policy.　　d. Assumption.

9. Which of the following is defined as "the right of decision or command"?

   a. Authority.　　c. Responsibility.
   b. Controlling.　　d. Directing.

10. Which of the following is defined as "a process of establishing and carrying out responsibilities"?

   a. Responsibility.　　c. Directing.
   b. Management.　　d. Controlling.

11. You are the chief of a department which is subdivided into three sections. It is the policy of the organization to decentralize authority and responsibility. In which of the following cases would you be adhering to that policy?

    a. The wife of one of the workers in Section A has complained to you that last week her husband didn't bring home any pay because he lost it all gambling at work. She threatened to inform the police. The organization has a strict policy against gambling, and violation of it is cause for disciplinary action or dismissal. You investigate and find that there are varying degrees of violation in all departments. You call in the three supervisors and tell them to clean up the situation. You do not divulge the name of the employee whose wife called, on the basis that you want all gambling stopped.
    b. You are strolling through Section A and see a worker sitting idle at his machine. You reprimand him severely and immediately return to your office.
    c. You have a rush job which one man can do in about 4 hours. You go to Section B and find the supervisor is at lunch. You select one of the workers, explain the rush job, and tell him to stop whatever he's been doing and start immediately on the new work.
    d. Your secretary seems to have more work than she can handle. You know, however, that the secretary in Section C is very efficient and always seems caught up on her work. One day you ask her to help out on some of your secretary's work, and she does it so quickly and efficiently that you continue giving her work to do. Her supervisor comes to you and protests that his secretary is overburdened as a result of the extra work and no longer has time to do yours. You reply that the needs of the organization come first, and that is why you have told his secretary that your work should have priority.

12. As chief of a department with several firstline supervisors reporting directly to you, in which of the following cases would you be exercising personal leadership?

    a. You have had complaints that the quality of the work produced in Section A has decreased during the past month. You call the supervisor to your office and ask him to take whatever steps he considers necessary to correct the situation.
    b. You have observed that several persons in Section B are often late coming to work. You watch closely, and the next time it happens you go directly to the offender and reprimand him.
    c. Your boss has told you there will be an unusually heavy workload during the following month and that it must be accomplished without an increase in personnel. You call a meeting with your supervisors, explain the situation, and ask for their suggestions and recommendations.
    d. Top management has decided that your department should take over part of the work that is being done in another department. You determine that Section C is best equipped to handle the work. You tell the supervisor to work out operational details and let you know if he runs into any difficulties.

13. You have been given the job of planning the organizational structure of the personnel section at a newly activated installation. Which of the following should be your first consideration?

    a. The number of authorized personnel.
    b. The budget ceiling.
    c. The work that must be done by the section.
    d. Getting the job done within the time allotted to you.

14. The primary purpose of organizing is to

    a. establish costs, procedures, and objectives.
    b. motivate the personnel with a desire to work efficiently.
    c. establish relationships among personnel, activities, and resources.
    d. delineate responsibilities of individuals and units.

15. If you, as coordinating officer for a project, meet with opposition from a staff officer, you should do which of the following?

    a. Convince him that his help is needed.
    b. Bypass him, in the interest of expediency.
    c. Report the situation immediately to your superior.
    d. Amend the project so that his help will not be needed.

16. For what purpose does the Department of the Army publish staffing guides?

    a. To guide in the selection of key personnel.
    b. To establish personnel ceilings.
    c. To establish staff procedures.
    d. To show methods of work that will increase efficiency.

17. Which of the following most adequately describes an SOP?

    a. It tells people why an action is performed.
    b. It tells people what to do and how to do it.
    c. It delineates standards of performance.
    d. It explains policies on supply and personnel.

18. Which of the following is a characteristic of personal leadership?

    a. Authority is decentralized to the lowest level possible.
    b. It allows competent subordinates to rise rapidly in the chain of command.
    c. Authority is highly centralized.
    d. It can be used more successfully in a large organization than in a small one.

19. You have been assigned as project officer for the Armed Forces Day celebration. The installation will be open to the general public, and there will be open houses, exhibits and displays, a parade, special luncheon groups, and afternoon entertainments. An important part of your job is seeing that everyone concerned knows when and where the various events will take place and his part in the activities. With which function of management is this phase of your work primarily concerned?

    a. Coordinating.
    b. Planning.
    c. Organizing.
    d. Controlling.

20. When the military pay voucher system was adopted, the personnel officer at one installation personally checked the first hundred vouchers prepared, then "spot checked" the rest of the vouchers. Each time he found an error he discussed it with the person who prepared the voucher. After all vouchers had been prepared, the officer made a list of all errors detected and distributed it to the personnel in the pay and allowances section. Which function of management was he exercising?

    a. Planning.
    b. Coordinating.
    c. Controlling.
    d. Directing.

LESSON 2--Principles and Policies of Management.

Credit hours: 1
Questions: 20

TEXT ASSIGNMENT: Memorandum 46-2--Principles and Policies of Management.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain the terms "principle" and "policy" as they pertain to Army management.
2. List and explain at least five basic principles and five basic policies of Army management.
3. List five characteristics of a good policy.
4. Explain the difference between technical skills and perceptual skills.

REQUIREMENT: Answer the following 20 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. Which principle of management states that workloads and technical requirements for a job increase when the scope of operations is enlarged?

    a. Functional growth.
    b. Departmentalization.
    c. Multiple hypotheses.
    d. Opportunity costs.

2. Which principle of management says that a man's skill increases in proportion to the effort he puts into his work?

   a. Sacrifice.
   b. Specialization.
   c. Scientific management.
   d. Parsimony.

3. Which principle of management states that efficiency is improved when definite patterns for operations and performances are established?

   a. Specialization.
   b. Standardization.
   c. Simultation.
   d. Departmentalization.

4. It is an Army policy that assignment of responsibility and delegation of authority should be made to the lowest practicable level and that responsible persons be clearly identified. Which principle of Army management supports this policy?

   a. Responsibility.
   b. Essentiality.
   c. Unity of command.
   d. Human relations.

5. Which principle of Army management requires that organizational structures should be designed to fit the mission of the command?

   a. Objective.
   b. Flexibility.
   c. Unity of command.
   d. Service.

6. What is the first principle of Army management?

   a. There should be only one boss at each level of command.
   b. Efficiency is measured by production cost.
   c. Related activities should be grouped together.
   d. No unnecessary activities should be established.

7. Which of the following is NOT a perceptual skill?

   a. Establishing production standards.
   b. Problem-solving ability.
   c. Understanding of human nature.
   d. Ability to adapt to changes.

8. Which of the following BEST describes an Army policy?

   a. It is an order prescribing specific actions.
   b. It is a statement of an administrative objective.
   c. It is a general guide for action.
   d. It is a regulation governing administrative procedures.

9. Which of the following principles of management is BEST illustrated by this statement: "The commander should not be bothered with petty problems"?

   a. Simplicity.
   b. Ideals.
   c. Exception.
   d. Cooperation.

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10. Which of the following principles of management is BEST illustrated by this statement: "Similar jobs should be grouped together"?

    a. Homogeneous assignment.
    b. Coordination.
    c. Multiple hypotheses.
    d. Simplicity.

11. It has been proposed that a new recordkeeping system be installed in the personnel section. Operations in several other sections would also be affected. Thorough investigation has shown that the new system would be a definite improvement, but several of those directly concerned are opposed to it. According to DA policy, what action should the commander take?

    a. Appoint a committee to make the final decision.
    b. Install the new system and meet the problems as they arise.
    c. Discard the idea of the new system and continue with the old.
    d. Clear up the problem areas before the new system is adopted.

12. Which of the following is NOT a feature of a good policy?

    a. Flexibility.
    b. Idealism.
    c. Sincerity.
    d. Stability.

13. Sergeant Black and Sergeant White are each in charge of a section where similar work is being done. Sergeant Black is a particularly strong leader, aggressive and forceful. Sergeant White is skilled and competent, but lacks the drive and assertiveness of Sergeant Black. Although the work of the two sections is of equal importance, Sergeant Black usually manages to get the easiest assignments, the better qualified personnel, and the best materials to work with. What principle of management is being violated in this situation?

    a. Discipline.
    b. Departmentalization.
    c. Cooperation.
    d. Human relations.

14. Which of the following principles of management is considered an aid to determining the relative importance of each factor of an operation?

    a. Coordination.
    b. Simulation.
    c. Probability.
    d. Analysis and synthesis.

15. Which principle of management requires that the abilities of the individual be matched to the requirements of the job?

    a. Parsimony.
    b. Human relations.
    c. Personnel.
    d. Participation.

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16. You are the chief of a department which is subdivided into two sections. It has been reported to you that one of the men in your department has several times come to work intoxicated and that it is suspected he drinks during working hours. What immediate action should you take?

    a. Talk it over with your superior and ask his advice on disciplinary measures.
    b. Call the man's wife and ask her cooperation in correcting the situation.
    c. Talk with the man's immediate supervisor and tell him to investigate the matter.
    d. Call the man into your office and get his side of the story.

17. What is a principle?

    a. A statement directing specific action.
    b. A statement based on past experience, with usually predictable results.
    c. A moral precept issued to establish desirable behavior patterns.
    d. A function of management.

18. Lieutenant Green was stationed at an installation where frequently there were important visitors, both military and civilian. He submitted a suggestion that, to create a better impression and enhance the prestige of the installation, a "Visitors' Service Section" be set up. The new section would, he proposed, be staffed to provide services normally provided by a number of other sections, such as personnel, transportation, special services, signal, and public information. Also, it would provide services of a personal nature. What principle of Army management would have shown Lieutenant Green that his suggestion probably would be disapproved?

    a. Principle of essentiality.
    b. Principle of unity of command.
    c. Principle of service.
    d. Principle of improvement.

19. Which of the following principles of management is BEST illustrated by this statement: "Unless all premises can be verified, the conclusion cannot be a certainty"?

    a. Exception.
    b. Probability.
    c. Analysis and synthesis.
    d. Simultation.

20. Lieutenant Baffle put Sergeant Beam in charge of a section where a corporal, a private, and three civilian typists were employed. Several weeks later Lieutenant Baffle observed that the private was spending most of his time in conversation with one of the typists. Consequently, the efficiency of the section was falling below standard. What action should Lieutenant Baffle take?

    a. Reassign either the private or the typist.
    b. Reprimand both the private and the typist.
    c. Assign extra duties to the private.
    d. Tell Sergeant Beam to correct the situation.

LESSON 3--The Function of Planning

Credit hours: 1
Questions: 20

TEXT ASSIGNMENT: Memorandum 46-3--The Function of Planning.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain the four basic principles of the function of planning.
2. Explain what a "forecast" is.
3. List and explain the five phases in developing a policy.
4. List at least five characteristics of a good plan.
5. List at least five probable results of poor planning.
6. List at least five benefits to be derived from good planning.

REQUIREMENT: Answer the following 20 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. A good plan has many characteristics. Regardless of all other factors and characteristics, there is one essential that must be present in every good plan. Which of the following is the primary characteristic of a good plan?

   a. It uses existing resources to the maximum.
   b. It is based on facts with minimum assumptions.
   c. It is capable of accomplishing the objective.
   d. It provides the necessary organization.

2. If the functions of management could be performed separately and in chronological sequence, which of the following would be a true statement?

   a. Controlling would be performed first.
   b. Planning would be performed first.
   c. Organizing would follow directing.
   d. Planning would follow organizing.

3. Which of the following normally would NOT be included in the contents of a plan?

   a. Activities involved.
   b. Final goal to be reached.
   c. Areas in which difficulties are likely to occur.
   d. Performance standards.

4. Which one of the following normally would NOT be the medium for disseminating an organizational plan?

   a. Memorandum.
   b. Regulation.
   c. Orders.
   d. SOP.

5. Which of the following is a statement of policy?

   a. The service club will conduct classes in square dancing each Monday evening.
   b. Company A will provide the honor guard for the parade on 30 May.
   c. Vacations will be scheduled so that not more than 50 percent of the personnel within a department will be absent at the same time.
   d. The post All-Star football team will participate in this year's interservice competition.

6. Which of the following BEST describes the relationship of detail to scope in a forecast?

   a. Detail increases as scope decreases.
   b. Detail increases as scope increases.
   c. Detail decreases as scope decreases.
   d. Detail is not affected by scope.

7. Which of the following is usually the most reliable source of information upon which to base a forecast?

   a. The opinions of persons who will be directly concerned with the operation.
   b. Individual experiences in operations of a similar nature.
   c. Organizational records and reports of previous similar operations.
   d. Capabilities and limitations of organizational resources.

8. Ignoring the fact that for some situations there is only one course of action and for others there may be dozens of possible courses of action, what normally should be the minimum number of possible solutions considered prior to deciding upon a course of action?

   a. Two.
   b. Three.
   c. Four.
   d. Five.

9. You are the officer in charge of the Personnel Actions Branch (one officer, one warrant officer, three enlisted men, five civilians) of the AG Section of Headquarters, Fort Williams, Iowa. Which of the following probably performs your branch-planning function?

   a. You, the manager.
   b. A planning subelement of your branch.
   c. An ad hoc committee of personnel of your branch.
   d. Your principal assistant.

10. Which of the following is the most logical answer to the question, "Why do we plan"?

   a. Efficient operations are dependent on good planning.
   b. It is required in modern society.
   c. Plans deal with the mechanics of operations--they tell how to get the job done.
   d. It is required by Army regulations.

11. Which of the following best describes forecasting?

    a. It is the process of gathering and analyzing data that will have a direct effect on a proposed operation.
    b. It is a method of deciding on a course of action to accomplish an objective.
    c. It is the process of formulating guidelines to direct the activities of an organization.
    d. It is the development of performance standards that will help a manager to predict probable work output.

12. What is the first step in the function of planning?

    a. Apportioning the budget.
    b. Determining the objective.
    c. Allocating the personnel.
    d. Selecting a course of action.

13. Which of the following is characteristic of a forecast?

    a. It originates at the lowest management level.
    b. It directs a course of action to achieve a given objective.
    c. It is the process of assembling and analyzing data.
    d. It provides a framework for the organizational structure.

14. Which of the following is characteristic of a policy?

    a. It provides guidelines for planning the activities of an organization.
    b. It contains a clear definition of the objective of a specific operation.
    c. It defines the duties of individuals within an organization.
    d. It outlines the best procedures to follow in order to reach a given objective.

15. Which of the following phases of policymaking would probably be accomplished last?

    a. Informing the organization as to its provisions.
    b. Testing provisions in organizational operations.
    c. Determining the best methods of gaining the cooperation of personnel who will implement the policy.
    d. Interpreting and deciding on exceptions to policy.

16. What is the corresponding term in a tactical situation for the "plan" in administrative operations?

    a. Commander's estimate.
    b. Operation order.
    c. Intelligence estimate.
    d. Operational report.

17. In the process of planning, with which of the following are you most concerned?

    a. Answering the questions, who, what, when, where, and how.
    b. Combining essential details.
    c. Relationships among your personnel.
    d. The efficiency of the work force.

18. A conference called to explain why a policy is being issued is an example of which phase of policymaking?

    a. Formulation.
    b. Education.
    c. Application.
    d. Promulgation.

19. For which of the following would a manager probably appoint an ad hoc planning committee?

    a. To conduct recurrent, or day-to-day operations.
    b. To plan all the major operations of the organization.
    c. To develop a training program for administrative personnel.
    d. To conduct a continuing review and evaluation of personnel utilization.

20. In which of the following cases would you have an "indirect" requirement for planning?

    a. You have been assigned as project officer for the Armed Forces Day celebration.
    b. You have been told to investigate the circumstances surrounding a recent accident.
    c. You have been notified that you will be escort officer for four visitors who will arrive at the post next Monday.
    d. Your regular assignment is post billeting officer, and five new officers and their families arrive on the post on the same day.

LESSON 4--The Function of Organizing.

Credit hours: 3
Questions: 20

TEXT ASSIGNMENT: Memorandum 46-4--The Function of Organizing.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain what is meant by "the function of organizing."
2. List and explain the four basic principles of organizing.
3. List and explain the three principle steps in organizing.
4. List five characteristics of a good organization.
5. List and explain the basic characteristics of three types of organizations.

REQUIREMENT: Answer the following 20 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. Which of the following is a required characteristic of a good staff officer?

   a. The ability to give orders and direct the activities of others.
   b. The ability to establish and maintain good liaison.
   c. The ability to make quick decisions.
   d. The ability to take quick corrective action when problems arise in an operational element.

2. Which of the following is a feature of the functional type of organization?

   a. The staff acts in an advisory capacity only and does not have authority over operational elements.
   b. Lines of authority flow in an unbroken channel from the manager through subordinate supervisors to the workers.
   c. The authority of each subordinate manager is supreme in his area of responsibility.
   d. A staff section has authority to direct and control activities insofar as they concern his area of specialization.

3. In applying the principle of homogeneous assignment to the process of grouping like responsibilities and duties within the organizational structure, which of the following need NOT be considered?

   a. Activities must not overlap.
   b. Duties must be clear-cut and similar in nature.
   c. Every duty and responsibility must be assigned to some employee.
   d. All activities must be grouped together.

4. The number of direct relationships between the manager and his subordinates increases as the number of subordinates increases. Which of the following would be the number of direct relationships among a manager and four subordinates?

   a. 10.
   b. 9.
   c. 8.
   d. 7.

5. There are disadvantages as well as advantages in the use of the scalar type of organization. The difficulty of establishing certain principles of organization is one disadvantage. Which one of the following is most difficult to establish properly in the scalar type of organization?

   a. Provisions for growth.
   b. Unity of command.
   c. Definition of duties.
   d. Delegation of authority.

6. Which of the following are the steps followed by the manager during the process of organizing?

   a. Learning the objective and determining the jobs.
   b. Determining the jobs and delegating authority.
   c. Determining the jobs, assigning personnel to the jobs, and accomplishing the objective.
   d. Determining the jobs, establishing the structure, and allocating the resources.

7. Which of the following is the step of organizing that includes assigning personnel to a job and providing necessary equipment and space in which to work and the time to do the work?

   a. Allocating resources.
   b. Determining the jobs.
   c. Establishing the structure.
   d. Considering the objective.

8. Which one of the following statements BEST characterizes the position of the staff in a directorate type of organization?

   a. The staff cannot order, but it can recommend action.
   b. The staff can order other elements to accomplish a task.
   c. The staff performs actions that are an integral part of the organizational objective.
   d. The chiefs of staff sections are coequal with subordinate element managers.

9. In which one of the following situations is the manager most likely to oversupervise his subordinates?

   a. Subordinates are located quite distant from the usual location of the manager.
   b. Subordinates are performing simple work tasks.
   c. Subordinates are performing specialist work tasks.
   d. Subordinates are located near the usual location of the manager.

10. Which one of the following terms would NOT be used in describing the characteristics of good organization?

    a. Simplicity.
    b. Flexibility.
    c. Rigidity.
    d. Stability.

11. Of the three general types of authority, that of a military manager is derived from which one of the following?

    a. His force of character.
    b. His force of personality.
    c. The position he holds.
    d. His specialized knowledge.

12. Only time can provide the true answer to whether we have effectively organized our offices and units. We can check and partially insure this effectiveness in advance by which one of the following actions?

    a. Organizing our office on the same lines as other like offices.
    b. Studying the organizational chart of the proposed organization.
    c. Grouping all related activities together.
    d. Establishing unity of command.

13. Which one of the following statements characterizes the position of the staff in a line-staff type of organization?

    a. The staff can recommend action.
    b. The staff can order other elements to accomplish a task.
    c. The staff performs actions that are an integral part of the organizational objective.
    d. The chiefs of staff sections are coequal with subordinate element managers.

14. Which of the following methods of organizing is most likely to result in a sound organization?

    a. Intuition.
    b. Trial and error.
    c. Scientific.
    d. Administrative.

15. Captain Jones is chief of the post transportation section. One of his subordinate supervisors is Mr. Brown, who is in charge of the maintenance unit of the motor pool. Captain Jones frequently visits the motor pool and carefully checks the work each man is doing. If it is not exactly as he thinks it should be, he then and there criticizes the man doing the work and sometimes takes him off that job and puts him on another. What principle of management is Captain Jones violating?

    a. Personnel.
    b. Unity of command.
    c. Delegation of authority.
    d. Homogeneous assignment.

16. In an infantry division, which of the following elements would be considered as "line"?

    a. Medical battalion.
    b. Tank battalion.
    c. Transportation battalion.
    d. Ordnance battalion.

17. What is the minimum number of persons that may be considered an "organization"?

    a. A manager and two workers.
    b. A manager and a worker.
    c. A manager, an assistant manager, and three workers.
    d. A manager, a supervisor, and four workers.

18. In which principle of organization is the location of personnel and activities a major factor?

    a. Span of control.
    b. Parsimony.
    c. Unity of command.
    d. Personnel.

19. Which principle of organization is concerned with placing people in jobs for which they are best fitted?

    a. Span of control.
    b. Delegation of authority.
    c. Unity of command.
    d. Homogeneous assignment.

20. Which type of authority is held by the leader of an informal organization?

    a. That which he gains through the force of his own character and personality.
    b. That which he holds because of his work assignment.
    c. That which he gains by becoming an expert in a particular field of specialization.
    d. That which he has attained through a position of seniority.

LESSON 5- The Function of Directing

Credit hours: 1
Questions: 20

TEXT ASSIGNMENT: Memorandum 46-5--The Function of Directing.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain what is meant by "the function of directing."
2. List five factors to be considered in determining the degree of directing required for an operation.
3. List and explain the advantages and disadvantages of the two general types of communication.
4. Explain what is meant by "three-way" communications.
5. List at least five characteristics of a good director.
6. List at least four characteristics of a good directive.

REQUIREMENT: Answer the following 20 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. By what means, according to tradition, is action initiated in a military situation?

    a. An SOP.
    b. Verbal communication.
    c. Transcription.
    d. An order.

2. In which of the following cases would a manager be LEAST likely to use a written form of communication?

   a. When a complicated table of figures is involved.
   b. When it is important that the prescribed order of operations be followed.
   c. When a previous order needs immediate clarification.
   d. When there will be a time lag in carrying out the order.

3. Which of the following statements is MOST applicable to the principle of communication?

   a. Communication takes place among men, machines, and organizations.
   b. Communication is concerned only with the transmission of information.
   c. For communication to occur, there must be a minimum of two people involved.
   d. Successful group effort can be achieved without communication.

4. Which of the following is an advantage of using the written form of directives?

   a. Written directives require little time and effort to prepare.
   b. When a directive is written, the recipient is able to study its contents.
   c. Written directives furnish the recipients a great deal of latitude regarding the course of action to be taken.
   d. The use of written directives results in a considerable savings in time and materials.

5. Which of the following actions on the part of the manager would NOT be considered a gateway to good communications?

   a. Establishment of a policy which would permit subordinates to interrupt the manager as they saw fit.
   b. Establishment of a remarks section in organizational reports.
   c. Adoption of frequent use of the conference.
   d. Establishment of a suggestion box.

6. Which of the following statements BEST describes the function of directing?

   a. It is the issuance of orders and close supervision over the workers to see that the orders are carried out.
   b. It is the channeling of individual effort into a pattern prescribed by the manager so that the objectives may be achieved.
   c. It is the process of getting people to perform their jobs well, willingly, and quickly.
   d. It is a series of manipulations exercised by the manager following the communication of the requirement.

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7. You are director of a department which has several subdivisions. You are aware that you are responsible for all actions of your subordinate supervisors and are determined to make a good showing for your department. What is the best way for you to do it?

   a. Require that each supervisor consult you on any matter requiring other than routine action.
   b. Allow your subordinate supervisors to attend to all details and procedures except the unusual.
   c. Require that a report of daily activities, actions, and procedures be submitted to you.
   d. Allow your subordinate supervisors full authority to cope with all situations which may arise in their areas of control.

8. Your superior has asked you for a report on certain activities within your department. You tell Sergeant Sharp, your most reliable man, to get the statistics and information you need and to have them ready for you the following morning although you realize it may mean he will have to work overtime. You have other pressing matters to attend to, so you make your instructions as brief as possible. What is the best way to make sure they will be carried out accurately?

   a. Tell him you are sure he knows what is expected of him and that you rely on him to do it.
   b. Ask Sergeant Sharp to repeat, in his own words, what he is supposed to do.
   c. Tell him that if he has to work overtime you will give him time off to make up for it.
   d. Check at frequent intervals to make sure he is doing as instructed.

9. A directive, either oral or written, must be clear, explicit, and concise. What is a fourth requirement?

   a. It must be sufficiently detailed to provide for all contingencies.
   b. It must be in technical language.
   c. It must be worded so that the authority of the superior to issue such an order is never in doubt.
   d. Those to whom it is directed must be able to carry out the instructions.

10. Which of the following illustrates lateral communication?

    a. Communication from a company commander to the commander of another company.
    b. Communication from the executive officer to the battalion commander.
    c. Communication from the company commander to the first sergeant.
    d. Communication from the company commander to one of his platoon leaders.

11. Under which of the following circumstances would the manager be MOST likely to use an oral directive?

    a. When the action to be performed is somewhat complex.
    b. When a condition of emergency exists.
    c. When the instructions must be memorized.
    d. When there is a time lag between the issuance of the directive and its accomplishment.

12. Your superior has just talked with you about a rush job and has given you precise instructions for getting it done. You have listened carefully, and taken notes. Later, in your office you realize that your boss has made several mistakes in telling you when certain of the actions should be taken. He will not be available for consultation until the following morning. What should you do?

    a. Follow his instructions exactly as he gave them to you, knowing that he will be responsible for any errors in judgment.
    b. Rearrange the sequence of actions and start on the job immediately.
    c. Ask your boss's immediate superior if you should make a change in procedures.
    d. Defer action until the following morning, when you can consult with your boss.

13. In nonverbal communications, which of the following creates the greatest hazard for the supervisor?

    a. His tendency to rely on them to reinforce verbal communications.
    b. Using them with superiors, but not with subordinates.
    c. His unawareness of the impression he is giving.
    d. Using them with subordinates, but not with superiors.

14. What are the two general types of nonverbal communications?

    a. Voluntary and involuntary.
    b. Behavior and mannerisms.
    c. Sound and action.
    d. Favorable and unfavorable.

15. What is meant by the three-way principle of communication?

    a. Oral, written, and demonstrated.
    b. Up, down, and across.
    c. Voluntary, involuntary, and received.
    d. Accepted, rejected, and ignored.

16. You have observed that there is a tendency among your personnel to display resentment and antagonism toward any of your orders or directions. They carry them out, but they slow up production. What is the best way to correct the situation?

    a. Call a meeting, and ask your superior to talk to the personnel.
    b. Write your directives in more positive and forceful words, making sure they cannot be misunderstood.
    c. Install a system of incentive awards to make the personnel want to work faster.
    d. Whenever you issue a directive, explain why it is necessary.

17 Which of the following activities would require the greatest amount of directing on the part of the manager?

    a. A typing pool which services the administrative elements of the organization.
    b. A transportation section which conducts a post-wide drivers' training and vehicle maintenance program.
    c. A signal maintenance section of which the majority of personnel are skilled technicians.
    d. A unit personnel section which maintains morning reports and service records.

18. Which of the following forms of communication would be MOST helpful to a new employee in learning procedures to follow in performance of his duties?

    a. Verbal instructions.
    b. Organizational policies.
    c. Organizational memorandums.
    d. An SOP.

19. Which of the following BEST describes communication?

    a. A piece of writing, such as a letter or a note, which is meant to convey a specific thought or idea.
    b. A process whereby management determines how information should be passed down the chain of command to the workers.
    c. A process of transmitting information through the use of electronic or automatic relay systems.
    d. The transmittal of information from one person to one or more other persons so that mutual understanding is achieved.

20. Which of the following is the MOST essential characteristic of a successful director?

    a. Ability to motivate others to perform duties according to previously made plans.
    b. Technical knowledge of the particular operation over which he has charge.
    c. Physical stamina that will enable him to withstand long hours and arduous working conditions.
    d. Tact, poise, and personal appearance that create a good impression on others.

LESSON 6- The Functions of Coordinating and Controlling

Credit hours: 3
Questions: 21

TEXT ASSIGNMENT: Memorandum 46-6--The Functions of Coordinating and Controlling.

LESSON OBJECTIVE: When you have completed this lesson, you should be able to:

1. Explain what is meant by "the function of coordinating."

2. Explain what is meant by "the function of controlling."

3. List and explain at least five methods of coordinating.

4. List five factors to be considered in determining the type and amount of control required for an operation.

5. List and explain five methods of initiating corrective action when performance is below standard.

6. Explain the principles and methods of work simplification.
7. Explain the purpose and methods of work measurement.

REQUIREMENT: Answer the following 21 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. Which is the lowest level at which coordination should take place?

   a. The firstline supervisor.
   b. The individual worker.
   c. The section chief.
   d. The departmental manager.

2. Which of the following is NOT considered a method of coordinating?

   a. Use of the liaison officer.
   b. Adjustment of physical and external conditions.
   c. Employment of committees.
   d. The structure of the organization itself.

3. Which of the following BEST defines the function of coordinating?

   a. Planning operations in an orderly and operationally sound sequence.
   b. Arranging matters so that individuals act in such a manner as to achieve an overall objective.
   c. Seeing that persons working in the same operational element are in agreement.
   d. Organizing details of an operation so that they fall into logical sequence.

4. As a section chief, you have been given an additional operation that must be performed by your personnel. When should coordination enter into your considerations?

   a. After you have completed your plans and are organizing your method of procedure.
   b. When you are planning how the operation should be performed.
   c. When you are ready to put your plans into operation and start to prepare directives.
   d. After directives have been prepared and disseminated to the operational agencies.

5. What is the most commonly used method of attaining coordination among operating personnel?

   a. Conferences.
   b. Telephonic communications.
   c. Letters and memorandums.
   d. Orders and directives.

6. What is the most difficult problem faced by a coordinating officer?

   a. The amount of time it takes to contact and talk with the persons concerned.
   b. The large number of details involved in any one operation.
   c. Rigidity of regulations and orders which prescribe and direct the operation.
   d. Differences in personality and viewpoints among individuals concerned.

7. What is the minimum number of persons that would be considered as constituting a conference?

   a. Five.
   b. Four.
   c. Three.
   d. Two.

8. Which of the following is NOT one of the steps which normally would be utilized in the corrective-action phase of controlling?

   a. Improvement of motivation.
   b. Establishment of standards.
   c. Administration of punishment.
   d. Assurance that subordinates are properly directed.

9. You have been appointed project officer for the blood bank drive. One of the most important elements of the job is that of coordination--to make sure that times, places, and people synchronize without confusion. When may you consider that coordination has been achieved?

   a. When you have planned and scheduled times and places, numbers of donors, and numbers of medical personnel required.
   b. When actual activities are underway and things are going harmoniously and according to schedule.
   c. When you have received satisfactory reports from your personnel that they are acting on your instructions.
   d. When you have given instructions to your personnel and told them how their part of the job fits into the overall project.

10. Which of the following BEST explains the function of controlling?

    a. Making sure that actions proceed according to plans, procedures, and policies.
    b. Maintaining close supervision of all subordinate personnel.
    c. Enforcing regulations and prescribing disciplinary measures.
    d. Planning operations and issuing directives to subordinates.

11. As chief of a supply section, you have received a number of complaints from units that your section services. What would be the best method of determining whether the complaints are justified?

    a. Examination of records and reports.
    b. Personal observation and inspections.
    c. Personal interviews with personnel.
    d. Conferences with chiefs of complaining units.

12. You have been appointed chief of a newly organized typing pool. What should be your first step in establishing methods of adequate control?

    a. Building high morale among the personnel.
    b. Dividing responsibilities according to abilities and job requirements.
    c. Determining and establishing standards of performance.
    d. Devising forms and establishing reporting procedures.

13. If you determine that production standards are not being met by your personnel, what step should you take first?

    a. Find out why production is lagging.
    b. Establish more realistic standards.
    c. Initiate a request for more personnel.
    d. Devise means of spurring your personnel to increased effort.

14. What is "trend" data?

    a. That which shows the present position of an operation or activity.
    b. Any data pertaining to one specific part of an operation.
    c. That which shows a change or changes occurring between two periods of time.
    d. Information which shows a comparison between like operations.

15. When should a manager exercise the coordinating function?

    a. On a weekly or biweekly basis, depending on the size of the operation.
    b. As part of the daily operations.
    c. When it is apparent that the organizational elements aren't working together.
    d. When his subordinates submit a report to him indicating that they have completed an action.

16. Which of the following BEST describes a liaison officer?

    a. An officer from a foreign nation on duty with a unit of the armed forces of that nation.
    b. An officer of field grade or above assigned to a field army headquarters.
    c. An officer from one organization on detached duty with another organization in order to provide coordination between the two organizations.
    d. An officer detailed from one organization to another when the second organization is not functioning satisfactorily.

17. The flow process chart is used to note the

    a. rate of production.
    b. actions of individuals or to follow the movement of materials.
    c. productivity of a section.
    d. determine the availability of personnel, material and equipment.

18. The work distribution chart is prepared in the following basic steps

    a. preparing rosters of employees and listing their jobs.
    b. determining organizational elements and charting their progress.
    c. determining staffing requirements and alloting requisitions.
    d. compiling task lists, compiling activity lists, and recording data from task lists and activity lists.

19. A measurement technique has validity if it

    a. measures what it attempts to measure.
    b. is true in all statistical aspects.
    c. can be readily checked.
    d. is accurate in its formulation.

20. The reliability of a measurement technique is determined by

    a. the accuracy of the computations.
    b. the positive correlation of one item to the other items.
    c. retesting under similar conditions and obtaining the same results.
    d. changing the conditions of the test and correlating the differential observations.

21. The advantages of the predetermined time technique are that it

    a. is extremely accurate and inexpensive.
    b. requires administration by highly qualified personnel.
    c. is adaptable to many areas and localities.
    d. is statistically compatible with correlations and regressions.

Edition code-1

ARMY CORRESPONDENCE COURSE

U.S. ARMY ADJUTANT GENERAL SCHOOL

SOLUTION SHEET

Edition date: Aug 71

SUBCOURSE 46--FUNDAMENTALS OF MANAGEMENT

Lesson 1--Introduction to Management
References are to Memo 46-1.
All questions are of equal weight.
Credit hours: 1

Solution		Reference
1.	d	4a
2.	c	4c(1)
3.	b	4
4.	c	4b(3)
5.	b	1
6.	a	4c
7.	c	4b
8.	d	3b
9.	a	3c
10.	b	3j
11.	a	3c
12.	b	2
13.	c	4a
14.	c	4b
15.	a	4d(2)
16.	b	4b(4)
17.	b	4c(2)
18.	c	2
19.	a	3e, 4d
20.	c	4e

Lesson 2--Principles and Policies of Management
References are to Memo 46-2.
All questions are of equal weight.
Credit hours: 1

Solution		Reference
1.	a	13 of annex A
2.	b	38 of annex A
3.	b	39 of annex A
4.	c	1b(3)
5.	a	1b(6),22 of annex A
6.	d	1b(1)
7.	a	4b
8.	c	2
9.	c	11 of annex A
10.	a	15 of annex A
11.	d	2k
12.	b	3d
13.	c	5 of annex A
14.	d	2 of annex A
15.	c	27 of annex A
16.	c	1b(3)
17.	b	1
18.	a	1b(1)
19.	b	31 of annex A
20.	d	1b(3)

Lesson 3--The Function of Planning
References are to Memo 46-3.
All questions are of equal weight.
Credit hours: 1

Solution		Reference
1.	c	5a and 6a
2.	b	1
3.	d	5d
4.	d	5c
5.	c	4b
6.	a	4a(3)
7.	d	4a(2)
8.	a	5b
9.	a	7
10.	a	3b
11.	a	4a
12.	b	5a
13.	c	4a
14.	a	4b
15.	d	4d(5)
16.	b	5c
17.	a	5c(1)-(5)
18.	b	4d(3)
19.	c	7c
20.	d	3b

Lesson 4--The Function of Organizing
References are to Memo 46-4.
All questions are of equal weight.
Credit hours: 3

Solution		Reference
1.	b	fig 7
2.	d	9a
3.	d	3c(1)
4.	a	fig 3
5.	a	7c
6.	d	4
7.	a	4c
8.	b	9a
9.	d	3b(5)
10.	c	5
11.	c	3d(1)
12.	b	4b(2)
13.	a	8
14.	c	6
15.	b	3a
16.	b	7
17.	b	1
18.	a	3b(5)
19.	d	3c
20.	a	3d(1)

Lesson 5--The Function of Directing
References are to Memo 46-5.
All questions are of equal weight.
Credit hours: 1

Solution		Reference
1.	d	7a
2.	c	6
3.	c	5
4.	b	7
5.	a	11
6.	c	2
7.	b	4e
8.	b	6b
9.	d	13d
10.	a	9c
11.	b	6
12.	b	6d
13.	c	8b
14.	a	8
15.	b	9
16.	d	12i
17.	b	4
18.	d	7b
19.	d	5
20.	a	12

Lesson 6--The Functions of Coordinating and Controlling
References are to Memo 46-6.
All questions are of equal weight.
Credit hours: 3

Solution		Reference
1.	b	2a
2.	b	4
3.	b	2b
4.	b	3b
5.	a	4a
6.	d	5
7.	d	4a
8.	b	10
9.	b	6
10.	a	7
11.	b	9c
12.	c	8
13.	a	10a
14.	c	9a
15.	b	3b
16.	c	4f
17.	b	15
18.	d	13
19.	a	20c
20.	c	20c
21.	a	22c

All concerned will be careful that neither this solution nor information concerning it comes into the possession of students or prospective students who have not completed the work to which it pertains.

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Edition code-1

ARMY CORRESPONDENCE COURSE

U.S. ARMY ADJUTANT GENERAL SCHOOL

EXAMINATION BOOKLET Edition date: Aug 71

SUBCOURSE 46--FUNDAMENTALS OF MANAGEMENT

TEXT ASSIGNMENT: All previous text assignments. In completing this examination you may use all memorandums or other instructional material accompanying this subcourse.

Credit hours: 2
Questions: 25

REQUIREMENT: Answer the following 25 multiple-choice questions. Select the BEST answer for each question and punch out the appropriate item on the answer card.

1. Which of the following is a probable result of the practice of bypassing in a chain of command?

   a. Subordinates are encouraged to produce more.
   b. Efficiency is stimulated.
   c. Production is increased.
   d. There is a breakdown in operational control.

2. What are the two broad categories into which communications may be grouped?

   a. General and specific.
   b. Simple and detailed.
   c. Routine and special.
   d. Oral and written.

3. When a manager makes subordinates responsible to him for accomplishing a task, which of the following statements is true?

   a. He is still charged with full responsibility for accomplishment of the task.
   b. He is overdelegating authority.
   c. He is underdelegating authority.
   d. He is still required to supervise every action or decision.

4. Which of the following is a prerequisite for holding a person responsible for the performance of a task?

   a. The person has proved that he can perform the task effectively.
   b. He has been delegated the authority necessary to accomplish the task.
   c. The task has been assigned to the person on written orders.
   d. He has been assigned a managerial position in the organization.

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5. While preparing the monthly report for the unit of which you are supervisor, you note that production figures have fallen below the established standards. In the process of determining the reason and taking steps to correct the deficiency, with which function of management are you primarily concerned?

   a. Planning.
   b. Directing.
   c. Controlling.
   d. Coordinating.

6. Which of the following is NOT an advantage of the use of the conference for the purpose of securing coordination?

   a. It provides a common meeting ground for superiors and subordinates.
   b. It permits open discussion of points that may require adjustment.
   c. It saves time, since directives do not have to be prepared.
   d. Its informal nature contributes to the resolving of differences.

7. Lieutenant Jones is in charge of an office in which Miss Bee, Miss Cee, and Miss Dee are workers. According to the theory of V. A. Graicunas, there are several types of working relationships among these people. Which of the following terms is used to express the relationship between Miss Cee and Miss Dee?

   a. Cross relationship.
   b. Direct single relationship.
   c. Direct group relationship.
   d. Indirect single relationship.

8. The gathering of facts and assumptions affecting a proposed task and the study of those facts and assumptions are specifically included in which of the following processes?

   a. Forecasting.
   b. Controlling.
   c. Coordinating.
   d. Policymaking.

9. Which of the following statements BEST describes the function of controlling?

   a. It is the accomplishment of the mission through the correction of mistakes in the execution phase of the operation.
   b. It is the process of seeing that everything is done according to established plans, procedures, and policies.
   c. It is the function which insures that each of the other management functions is working effectively toward the accomplishment of the mission.
   d. It is the act of comparing actual performance with established standards.

10. Which of the following would result if there were full application of the principle of unity of command in an organization?

   a. There would be no subordinate or intermediate manager between the worker and the commander of the organization.
   b. Each individual would know to whom he reports and whom he directs.
   c. There would be the same number of subordinates directed by each supervisor.
   d. There would be direct lines of communication between a worker and the various managers.

11. Which one of the following should have the LEAST influence on the extent of the span of control in an organization?

    a. The cost of the activity.
    b. The time it takes to do the work.
    c. The distance between supervisor and subordinates.
    d. The nature of the work.

12. How are personnel requirements affected when the span of control is reduced in an organization?

    a. More supervisors are needed.
    b. Fewer supervisors are needed.
    c. Fewer workers are needed.
    d. Personnel requirements are not affected.

13. What is management by exception?

    a. All decisions, without exception, are made by the manager.
    b. In exceptional cases the manager delegates complete responsibility to one of his subordinates.
    c. In the manager's absence, he is represented by his chief assistant.
    d. Routine matters are not called to the attention of the manager.

14. Which of the following statements BEST describes the function of coordinating?

    a. It is the consultation of the manager with his subordinates to secure their cooperation toward accomplishment of the mission.
    b. It is a condition wherein individuals are working together in harmony.
    c. It is a series of positive actions taken by the manager to insure that all elements of the organization are moving "on course" toward the objective.
    d. It is the integrating of all efforts and details necessary to attain an objective or accomplish a mission.

15. How is the value of an administrative activity determined?

    a. By an analysis of production costs.
    b. By the number of individuals for whom it performs services.
    c. By the complexity of its operations.
    d. By the services it performs for the using agencies.

16. The inclination of individuals to work together informally is called

    a. group association
    b. division of work.
    c. delegation of authority.
    d. unity of command.

17. The purpose of a policy is to

a. direct operational procedures.
b. limit manpower requirements.
c. establish organizational objectives.
d. provide organizational guidelines.

18. Which principle of management is violated when a worker is required to report to two different superiors?

a. Span of control.
b. Delegation of authority.
c. Unity of command.
d. Allocation of resources.

19. A common complaint of managers is that subordinates fail to use initiative. Exclusive of personal deficiencies, subordinates may not use initiative simply because the manager usually overrides their decisions. If such is the case, how does the principle of delegation of authority apply?

a. The manager has overdelegated authority.
b. The manager has underdelegated authority.
c. The manager has properly delegated authority.
d. Delegation of authority has no bearing on a subordinate's lack of initiative.

20. Assuming that you are the officer in charge of each of the following activities at your installation, in which would you find coordination least difficult?

a. Armed Forces Day celebration.
b. Nth Army bowling tournament finals.
c. The annual United Fund drive.
d. Setting up a training program for post supervisory personnel.

21. The flow process chart is used to note the

a. rate of production.
b. actions of individuals or to follow the movement of materials.
c. productivity of a section.
d. determine the availability of personnel, material and equipment.

22. The work distribution chart is prepared in the following basic steps

a. preparing rosters of employees and listing their jobs.
b. determining organizational elements and charting their progress.
c. determining staffing requirements and alloting requisitions.
d. compiling task lists, compiling activity lists, and recording data from task lists and activity lists.

23. A measurement technique has validity if it

a. measures what it attempts to measure.
b. is true in all statistical aspects.
c. can be readily checked.
d. is accurate in its formulations.

24. The reliability of a measurement technique is determined by

    a. the accuracy of the computations.
    b. the positive correlation of one item to the other items.
    c. retesting under similar conditions and obtaining the same results.
    d. changing the conditions of the test and correlating the differential observations.

25. You are the chief of a department which is subdivided into three sections. It is the policy of the organization to decentralize authority and responsibility. In which of the following cases would you be adhering to that policy?

    a. The wife of one of the workers in Section A has complained to you that last week her husband didn't bring home any pay because he lost it all gambling at work. She threatened to inform the police. The organization has a strict policy against gambling, and violation of it is cause for disciplinary action or dismissal. You investigate and find that there are varying degrees of violation in all departments. You call in the three supervisors and tell them to clean up the situation. You do not divulge the name of the employee whose wife called, on the basis that you want all gambling stopped.
    b. You are strolling through Section A and see a worker sitting idle at his machine. You reprimand him severely and immediately return to your office.
    c. You have a rush job which one man can do in about 4 hours. You go to Section B and find the supervisor is at lunch. You select one of the workers, explain the rush job, and tell him to stop whatever he's been doing and start immediately on the new work.
    d. Your secretary seems to have more work that she can handle. You know, however, that the secretary in Section C is very effecient and always seems caught up on her work. One day you ask her to help out on some of your secretary's work, and she does it so quickly and efficiently that you continue giving her work to do. Her supervisor comes to you and protests that his secretary is overburdened as a result of the extra work and no longer has time to do yours. You reply that the needs of the organization come first and that is why you have told his secretary that your work should have priority.